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PEABODY JOURNAL OF EDUCATION

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PEABODY JOURNAL OF EDUCATION

VOLUME 7 MARCH, 1930 NUMBER 5

A FACULTY EFFORT IN THE IMPROVEMENT OF COLLEGE TEACHING[1]

H. L. DONOVAN
Eastern Kentucky State Teachers College, Richmond, Kentucky

A college exists that youth may be instructed. Its chief function is teaching. Its value is in direct proportion to the instruction given. It is easy to lose sight of this purpose amid the complexities of college administration. Many colleges have strayed from the path that leads to their glory. The dire necessity of increasing the endowment or persuading a Legislature to extend adequate support; the complications involved in dealing with architects and contractors in the erection of buildings; the manifold problems of public relations; all tend to divert the mind of the administrative officer away from its main objective. At the same time the faculty is too frequently enticed away from its true mission by the fascination of research, leaving the problems of teaching to youthful instructors or student assistants not adequately prepared to deal with such vital matters. These facts make it essential for an institution to take inventory frequently. Faculty, deans and the president must gather and consider those things which are fundamental—first, and of eternal value.

Even teachers on a good faculty cannot neglect working at this problem. They never quite achieve the ideal. If they give up, however, and stop striving to attain it, they are certain to lose ground. This is as true in the realm of teaching as it is in any field of endeavor. It requires constant effort to maintain and develop teaching ability. It is not a skill that can be once acquired and reduced to an automatic mechanical process. We do not learn to teach as we master the skills essential to drive a car. Teaching too nearly

[1]The author is indebted to the members of the faculty for each of the 76 suggestions made in this paper.

approaches the realm of fine arts to be dealt with in this manner. Like the musician who achieves artistry the teacher must keep working at his profession constantly as well as conscientiously. He must be possessed of a passion to be a teacher of the first order.

If continued excellence in teaching is to be maintained, it is essential for those engaged in the work to be constantly revitalizing their minds. In recognition of this fundamental principle, the faculty of Eastern Kentucky State Teachers College from time to time meets to consider problems of mutual interest. One of the recent efforts at self-improvement was an attempt on the part of the faculty to answer after a month's study and self-examination the question: "What am I doing to improve the quality of instruction in this institution?" We deemed this question to be worthy of a fresh approach.

An hour of spirited discussion revealed a number of stimulating suggestions and proved entirely too short to permit all who wished to participate to contribute to the conference. It was decided that each faculty member would write out very briefly in sentence statements his contribution and hand them to the secretary of the faculty. Approximately two hundred constructive suggestions were received. Many of them, however, were given several times by different instructors. An attempt to summarize these resulted in the selection of 76 statements, no two of which are exactly alike and each with more or less merit. Some of these may appear trivial to the reader but a closer scrutiny will probably reveal their value. If considered separately, they may possess but little worth. They will be valuable only as they are integrated and correlated into a pattern for the improvement of teaching.

---

1. Keep work within the intellectual range of the students.
2. Measure results of instruction more carefully and objectively.
3. Make efforts to improve comprehension by giving advance explanations, advance questions, etc., to get students to read with the intention of finding and retaining central thoughts.
4. Give standard tests in order that students may compare their work with the work of other students in the same course at different institutions.
5. Emphasize in the assignments of lessons the one particular thing to be studied and hold the students responsible for this.
6. Hold students to a definite standard of achievement by explaining to them just what is to be accomplished by each drill or type of work.
7. Experiment with different methods of presenting subjects and compare results obtained.
8. Use a definite method of keeping records which will not leave the pupil in doubt as to his achievement.
9. Create interest by using illustrative materials and making field trips.

10. Give the student an opportunity to express himself as well as to be impressed. Call on students to recite frequently.
11. Encourage students to work toward definite goals for definite dates.
12. Frequently review important facts.
13. Require student teachers to organize each large unit of work before teaching.
14. Give demonstration lessons.
15. Teach by the unit system of instruction.
16. Have a maximum amount of student activity.
17. Change methods often so there will not be too much lecturing and question and answer type of recitation.
18. Make students responsible for special reports.
19. Maintain in the classroom a natural, informal attitude.
20. Maintain an interest in the subject sufficient to obliterate all concern with the question of discipline.
21. Introduce collateral reading material with which text material is enriched.
22. Be a *master* in one's subject rather than a *servant*.
23. Interrupt the regular discussion occasionally with explorations into wider and different fields.
24. Criticize student's attitude of study in a helpful manner.
25. Systematize note taking.
26. Insist upon the proper use of dictionary.
27. Teach freshmen how to study your subject.
28. Emphasize the use of books and libraries.
29. Request each student to compile a scientific vocabulary.
30. Attempt to improve the student's ability to make careful observations and record them accurately and to do this as independently as possible.
31. Take groups of students to library stacks to aid them in making bibliographies.
32. Make an analysis of the texts most commonly used in given courses and use these facts in the preparation of syllabi.
33. Attempt to inspire students to do more direct library work.
34. Try to give students a view of the field of Mathematics beyond this course.
35. Encourage the popularizing of difficult scientific articles so that the student will disseminate scientific information in the language of the layman.
36. Stress hard work and emphasize the joy of honest toil expended in one's college career.
37. Interview students with a view of improving their work and creating faculty-student friendships.
38. Use every means you can think of to create a desire on the part of the pupil to excel.

39. Make the acquisition of knowledge a pleasure.
40. Insist on a steadily increasing horizon for yourself so that your enthusiasm may be ever fresh and that your interpretations of classroom material may be interesting and accurate.
41. Attempt to develop a professional attitude on the part of students.
42. Respect personality of student so that he may feel free to think for himself and express himself without fear.
43. Mimeograph drill and test materials.
44. Prepare syllabus for each course.
45. Construct objective tests for each course.
46. Compile an accurate, detailed bibliography for each course.
47. Collect and classify bulletins for use of students and instructors.
48. Make clippings for the use of different courses.
49. Make greater effort to secure equipment to make the classroom beautiful.
50. Provide bulletin boards.
51. Promote field trips that familiarize students with the real things that have been studied.
52. Interest students in the new books placed in the library.
53. Furnish members of class with records of achievement in graph form.
54. Give students outlined lessons occasionally.
55. Stimulate the student's intellectual curiosity by foreign material of all sorts (maps, wall charts, pictures, curios, bulletin board material, foreign correspondence, foreign journals, etc.) so that he may seek larger knowledge on his own initiative.
56. Visit the Training School more frequently.
57. Inaugurate "the opportunity hour" when students may come for conference and help.
58. Work to overcome cheating in examinations and other irregularities in work.
59. Read the current literature bearing on the subject which you teach and make use of good suggestions.
60. Help the pupil to analyze his mistakes and suggest remedial work designed for his particular difficulty.
61. Keep room neat and clean.
62. Pursue a course of reading for personal development.
63. Correct and return themes more promptly.
64. Begin and stop classes exactly with the signal.
65. Give more individual instruction.
66. Permit interruptions during lecture for questions.
67. Require term and semester papers with bibliographies and annotations.
68. Know your students.
69. Keep an open mind to suggestions from any source as to ways of increasing your own efficiency.

70. Demand of students a consistently high grade of work, the quality of which standard is determined by what other schools require of students of similar grade.
71. Learn personal history of your students.
72. Try to keep work in education practical.
73. Require students to stand and talk to the class in a direct manner.
74. Correct students in their pronunciation of words.
75. Make each recitation an English lesson.
76. Procure commercial displays for information of class.

PUPIL PARTICIPATION IN SCHOOL CONTROL

A. L. MORGAN
Dick Dowling Junior High School, Beaumont, Texas

Pupil participation in school control has been in operation in Dick Dowling Junior High School for five years. It is regarded by the teachers and pupils as an indispensable part of the school's organization. No one would seriously consider returning to the old order of things when the faculty assumed full control. In the vernacular of the day, I might say, "Them days are gone forever."

The following is an explanation of the part shared by the pupils in the conduct of the school.

The Home Room Organization—There are twenty-four home rooms. Each is composed of pupils of different levels within the grade, there being three grades, sixth, seventh and eighth. Each home room elects its own officers, which are: President, Vice-President, Senator, Secretary, Treasurer, Sergeant-at-Arms and Reporter.

The President appoints the following committees: Program Committee, Reception Committee, House-keeping Committee, Welfare Committee, and Good News Committee.

Duties of the home-room officers and committees are:

The President—

1. To call the home-room members to order.
2. To lead the members in the salute to the flag, pledge of allegiance, and the American's creed.
3. "To announce the business in the proper order for consideration."[1]
4. "To entertain motions regularly offered by the members and put them to a vote, if in order, and announce the results of the vote."
5. "To decide all questions of order subject to appeal."
6. "To preserve order and decorum in all business."
7. "To enforce the observance of all rules of procedure, unless waived by common consent."
8. "To nominate or appoint all members of committees not otherwise selected."
9. "To sign and authenticate—with the secretary—all acts and orders of the home room."
10. "To designate a member, if there is no regular vice-chairman, to take the chair whenever vacated by himself."

Vice-President—

To serve in the absence of the President.

Senator—

1. To attend all meetings of the Student Senate.
2. To participate in the deliberations of that body.
3. To report to the home room from time to time the actions of the Student Senate.

Secretary—

1. To keep a record of the home room meetings.
2. To conduct the correspondence for the group.
3. To preside in the absence of both the President and the Vice-President.

[1]Quoted items are from Howe's *Handbook of Parliamentary Usage.*

Treasurer—
1. To keep a record of all monies received and expended.
2. To see that all money belonging to the home room is properly safeguarded.
3. To report from time to time to the whole group the standing of the treasury.

Sergeant-at-Arms—
1. To maintain order during the meetings.
2. To act as door-keeper.

Reporter—
To report all items of interest relating to the activities of the home room to *The Scribbler* and *The Junior Journal.*

Program Committee—
1. To prepare programs for regular home room meetings, assigning parts to various pupils. These programs are to be based mainly on mimeographed material sent out by the extra-class room activity director.
2. To make two copies of the program, one for the principal's office, the other to be posted in the room one week in advance of the date to be given.
3. To see that all pupils have opportunity to appear as often as occasion will permit.

Reception Committee—
1. To extend a cordial welcome to new pupils. One way is by leading in the clapping of hands when a new pupil is introduced in the room.
2. To introduce newcomers to the teachers and pupils of other rooms.
3. To aid them in reaching their class rooms and inform them regarding traffic rules; times for going to lockers; cafeteria rules; time and purpose of the assembly, home room, clubs, etc.

Housekeeping Committee—
1. To make the room attractive by growing potted plants, flowers, etc.
2. To select and hang appropriate pictures.
3. To keep shades drawn properly, to arrange chairs and have all things in readiness for incoming classes.
4. To read the thermometer at intervals.

Welfare Committee—
1. To care for pupils' property when they are absent.
2. To send lesson assignments to absent pupils.
3. To visit sick members.
4. To send flowers, letters, books, etc., to sick members.

Good News Committee—
1. To report achievements of home-room members, in or out of school.
2. To make public, from time to time, acts of school spirit by members of the home room.

The Student Senate—The Student Senate is composed of twenty-four senators, one from each home room, elected by the pupils of the room. This body is presided over by a president and a vice-president elected by the student body at large. It is sponsored by the principal, assisted by the director of extra-classroom activities. Article V of the Constitution and By-Laws reads: "It shall be the duty of the Student Senate—

1. To set before the student body exemplary habits of conduct, proper attitudes and ideals of citizenship.
2. To appoint the following squads and fix their duties and terms of office: The Traffic Squad; The Noon Hour Squad; The Usher Squad; Such other squads as may be necessary.
3. To appoint a Student Court and fix the qualifications of its members and their duties.
4. To prescribe the rules and regulations governing the conduct of pupils in the halls, cafeteria, on the grounds, when crossing the streets adjacent the block on which the school is located."

The Senate holds its meetings every Thursday at Activity Period, 10:30 to 11:15 A. M. Besides the president and vice-president, it has a secretary

and a number of standing committees. As illustrations of what transpires at the sessions of this Senate, the minutes of two meetings are here given:

MINUTES OF STUDENT SENATE NOVEMBER 7

"The meeting was called to order with President Walker in the chair. Mr. Morgan, our sponsor, was absent, but we went on with the meeting. Following the roll call, the minutes of the previous meeting were read and approved. There being no old business, the President appointed the following committees, explaining the purposes for which each was appointed:

"A committee to draft rules and regulations governing the conduct of pupils while in the halls, corridors, on the stairways, and fix the penalties for their violation to be inflicted by the Student Court. The following Senators were appointed on this committee: Olive Horne, Sam Debes, Gladys Haines, Jimmie Cokinos, and Lynda Lee Renfroe.

"A committee to draft rules and regulations governing the conduct of pupils in the cafeteria and prescribe penalties to be given by the Student Court for their violation. Marjorie Megarity, J. P. Thames and Dick Swope were appointed on this committee.

"A committee to draft rules and regulations governing the conduct of pupils on the school grounds and fix penalties to be administered by the Student Court for violations of these rules. The chair appointed Exeen Thiele, Thelma Hays, Doris Bowers and Thelma Gilchrist.

"A committee to draft rules and regulations governing the manner of crossing streets at intersections adjacent the block on which the school is located. Melanney Schwartz, Nellie Rae McManus, Jane Smith, Hallie Mae Walker, and Sarah Brammer were appointed to do this.

"The President then instructed these committees to form themselves into groups and begin their work. The remainder of the time was devoted to carrying out the instructions of the President."

MINUTES OF STUDENT SENATE DECEMBER 5

"The President called the meeting to order. The roll was called with the following members absent: Sidney Hooker, Lynda Lee Renfroe, and Sam Debes. The minutes were read and approved.

"Under the head of new business, Senator ——— suggested that the President appoint a committee to investigate the conduct of certain members of the Senate whom he had been informed were guilty of misconduct on two or three occasions. It was his opinion that any pupil guilty of such acts as he had heard these were had no right to a place in the Senate; that there were too many deserving students to allow this matter to go unnoticed. Acting upon this suggestion, the President appointed ———, ———, ——— to make inquiries of the teachers of these pupils and report their findings at the next meeting.

"The next item of business was a discussion of who should take Phyllis Billingsley's place in the Student Court, she having resigned to fill a vacancy on the Traffic Squad. The question arose as to the wisdom of allowing sixth graders to occupy places in the Court. Senator Thames took the position that sixth graders should be represented in this Court. Senator Horne took the opposite view. Senator Wahrmund moved that only eighth graders be allowed to serve. Senator Morgan seconded the motion, saying that only eighth graders should serve since sixth grade pupils have two more years to enjoy this honor, while the eighth graders have only this year. It was moved and seconded that the matter be reopened for further discussion at the next regular meeting. The bell having rung, the Senate stood adjourned."

The Traffic Squad—Mounted on blocks which divide traffic going in opposite directions, the Traffic Squad supervises the movement of pupils while changing classes, on entering and leaving the building in the morning, noon hour and at the close of school.

Members of the Traffic Squad wear silver-plated badges bearing the words, "Patrol—Dick Dowling Junior High." The two captains, one for each floor, wear badges of a different designs inscribed with the word, "Captain." The

chief wears a gold badge with the word "Chief" on it. Each officer carries a whistle, and a pad on which to write the names of offenders.

As already stated, members of the Traffic Squad are appointed by the Student Senate.

It is the duty of the chief and his captains to confer with the principal regarding ways and means of preserving good order in the halls and on the stairways and to aid pupils in reaching their classes promptly. The chief assigns each member of the Traffic Squad his post of duty. He must also see that the captains are on the job and that the names of traffic offenders are reported to the Student Court. In case of a cop's absence, the captain puts in a substitute or goes on duty himself.

Members of the Traffic Squad serve for one year, unless removed for good cause. Members of this squad guilty of misconduct are temporarily suspended by the Chief until their cases can come before the Student Court.

Safety Patrol Squad—The purpose of this group is to see that the pupils get safely across the streets near the school. It was organized with the help of the local Boy Scout Executive and the Chief of Police. It is sponsored by a member of the faculty.

This squad consists of about twenty-five members. Only Boy Scouts can belong. After a period of training, they are placed on duty. They serve in groups of four, one patrolman for each corner of the block on which the building is located. A sergeant is in charge of each group. The schedule of service includes before school, during the noon hour, and at the close of school, while pupils are approaching and leaving the school grounds.

While on duty the members of the Patrol Squad are required to wear their Scout uniforms, a white sash across the shoulders, and a badge bearing the words, "Junior Traffic Police." The badges are furnished by the Chief of Police.

The Safety Patrol Squad performs a distinct service to the children in this school as well as to the public generally by safeguarding human life.

Other Squads—Two other squads do effective service. These are the Noon-Hour Squad and the Usher Squad. The duties of the Noon-Hour Squad, in brief, are:

1. To see that pupils do not litter up building and grounds with paper, left over food and the like during lunch period.
2. To have charge of washrooms, seeing that each pupil washes his hands properly before entering lunch room.
3. To prevent pupils from leaving trays and dishes on the tables when they have finished eating their lunches.

Duties of the Usher Squad are:

1. To meet visitors attending assembly exercises and welcome them.
2. To conduct them to the reserved seats in the auditorium.
3. To provide each with a mimeographed copy of the assembly program.
4. To show visitors about the building or to any room they desire to visit.
5. To introduce visitors to the teachers. Members of this squad are expected to know correct forms of introductions.

6. To familiarize themselves with the organization of the school, the work of the different departments, so as to be able to answer questions intelligently.
7. To thank visitors for coming and bid them come again.

The Student Court—Members of the Student Court are appointed by the Student Senate. It is made up of six judges, one of whom is the chief. This Court convenes every Monday at Activity Period. It is sponsored by the principal. Offenders are arraigned before this Court and their penalties fixed. It has jurisdiction over cases arising from misconduct of pupils in the halls, on the stairways, on the grounds, and at street crossings near the school building. Only the most flagrant cases are sent to the principal. The penalty most often inflicted is the writing of an essay of fifty, one hundred, or more words dealing with the misdemeanor of which the pupil stands accused. These essays are read by a committee of the Court. If an essay is unsatisfactory, it is returned to the writer who is required to rewrite it. Of course there are other and more severe penalties but these are reserved for offenders who are repeatdly sent in for misconduct.

The three essays which follow illustrate the nature of the penalties most often inflicted:

"Why Obedience is Necessary to Cops"

"Because the cop is a good fellow and should be respected he tries to help you in every way and is a help to everyone sutch as a visitor he shows them around and helps them in every way. He knows the school and is a out standing pupil and should be respected with the highest respect while he is on duty. He tries to keep order in the halls and helps you find lost articles. The Judge is also a high standing student and sentinces you so you will quit doing wrong in the halls.

"How to Walk Up the Steps"

"If you ever come to Dick Dowling Jr. High School of Beaumont, Texas, I warn you not to take two steps at a time when you walk up the steps to the second floor. I did and I had to go to Court. When you are walking up the stairway you should take only a step at a time. You should come down the same way. You must also keep to the right. I will try and obey the rules after this."

"Why I Should Not Jay Walk"

"The reason I should not jay walk is because it is aginist the rules of the city and the school. When you jay walk you are liable to be struck by a passing car. Jay walking is not safe. You can be much safer if you do not jay walk. A car may not be able to stop and it would have been better to play safety first. I don't intend to jay walk any more."

CAUSES OF TEACHER-FAILURE IN ALABAMA

H. W. JAMES
Alabama College, Montevallo, Alabama

Every school administrator hopes that each new teacher will succeed. He has selected her because he thinks she will. Every person in charge of teacher-training work hopes that the graduates will all succeed; he has organized courses which in his opinion will be of utmost help to them. Every beginning teacher hopes she will succeed, and undoubtedly expects to do so. Still, we have failures. An analysis of why teachers fail is the first necessary step in lessening failure.

Some failures are caused by weakness on the part of the administrator. Sometimes unreasonable regulations are put in which cause teachers to have an antagonistic attitude and react by breaking all reasonable social conduct standards. Sometimes the principal does not stand back of his teachers and takes sides with the pupils, or the people in the community.

While in some instances, the administrator may be wholly or in part to blame for a teacher-failure, the teacher herself undoubtedly is responsible in most cases for her own lack of success. There have been numerous studies dealing with the causes of teacher-failure, and it may seem to some that by this time we should be able to point out the exact difficulties. However, the causes may change due to several factors, among which are the increase in the average amount of training secured by teachers, differences in community social standards, the increased burden of discipline thrust upon the school due to changing family life, and sectional differences in ideals which affect the conduct of the pupils.

Why do Alabama teachers fail? During the last year an attempt was made to find the most common causes. In this study a case method was used. In place of getting the opinions of principals and others as to the reasons they think cause failure, they were asked if they knew personally of an instance of a teacher who has failed. The criterion of failure was the inability to be re-elected. Those knowing such a teacher were asked to check the factors which seemed to contribute to her failure. Data was secured from three types of individuals—college freshmen, teachers, and principals. It was decided that data should be included from students of teachers since very often they seem to analyze a situation more accurately and quickly than the school administrator. Furthermore, they are looking at the problem from "the other side of the fence," since in a good proportion of the time they are the causes of teacher-failure, both directly through personal action and indirectly in forming community opinions through their reports.

College freshmen were questioned rather than upper classmen because of the recency of experience with public school teachers. Information was obtained from students concerning 118 teachers who had failed.

The students were given a list of ten factors which might cause failure and were told to check the items which in their opinion caused failure to the teachers whom they knew. They were also asked to add any other factors which were not listed.

Following are the ten factors with the number of times they were checked as contributive in 118 teacher-failures:

Factors	*Number of Times Checked*
Poor discipline of pupils	60
Temper	50
Too many dates	37
Too much intimacy with pupils	30
Lack of knowledge of subject matter	27
Lack of interest in teaching	25
Lack of co-operation with school official	20
Ill health	13
Immaturity	13
Lack of self-confidence	11

The second source of information was teachers. (Exactly the same plan was used as with the college freshmen.) They were Alabama teachers who were attending summer school, and information was obtained from one hundred of them, each of whom knew one teacher who had been a failure. Below are the ten factors with the number of times they contributed to failure in 100 cases as analysed by teachers.

Factors	*Number of Times Checked*
Poor discipline of pupils	76
Temper	62
Lack of interest in teaching	56
Lack of knowledge of subject matter	50
Lack of co-operation with school official	50
Too much intimacy with pupils	45
Too many dates	40
Ill health	37
Lack of self-confidence	28
Immaturity	19

The third group of people from whom information was secured was school administrators. From this source reports on forty-two cases of teacher-failure were obtained. Again a list of causes was used; however, in place of ten factors fifteen were listed. In addition it was asked that any factor not listed be added. Following are the fifteen factors with the number of times they were mentioned as contributive to failure in 42 cases:

Factors	*Number of Times Checked*
Poor discipline of pupils	21
Lack of co-operation with school official	21
Poor methods	20
Lack of interest in teaching	18
Lack of sympathy with children	15
Too many dates	14
Not entering into community activities	13
Too much intimacy with pupils	12
Laziness	12
Temper	10
Lack of self-confidence	10
Personal unattractiveness	9
Ill health	7
Immaturity	6

It is unfortunate that the list of factors used by the principals had an addition of five items to the original ten.

SUMMARY

Discipline is given first place by each group. Temper which is very closely associated with discipline is ranked high by students and teachers, but not so high by the principals. Too many dates and intimacy with pupils are both ranked in the upper half in importance by the students and principals, but both are put slightly lower by the teachers themselves. Lack of knowledge of subject matter was placed about midway by all groups, although teachers and students ranked it slightly higher than principals. Lack of co-operation with school officials was ranked of equal importance to discipline by the principals, and about midway by teachers, and lower by pupils. Ill health, immaturity and lack of self-confidence were the lowest three in the analysis of each group.

A small number of items was used deliberately in this study on the basis that teacher-failure at present usually comes through violation of major issues. From a trial of various rating scales for student-teaching, including both elaborate and simple types, it seems that the supervising teacher's estimate of larger items determines her answers to a number of small sub-heads. Dr. F. B. Knight of the University of Iowa in several studies of the rating of public school teachers has concluded the same thing.

CONTRIBUTION OF THE TEACHER-TRAINING AGENCIES IN TENNESSEE TOWARD SUPPLYING THE DEMAND FOR TRAINED TEACHERS IN THE STATE

JOHN Q. VANCE
Bethel College, McKenzie, Tennessee

In this study it is assumed that two years of education beyond the secondary school shall constitute a minimum standard of training for elementary-school teachers. This is the standard generally recognized by state departments of education and agreed upon by students of the problem.

ANNUAL DEMAND FOR NEW TEACHERS

Newness has been conceived of, for the purpose of this study, as the condition of a teacher who has not previously taught school. The number of new teachers needed annually in Tennessee may be determined by the number, brought into the teaching service each year, who have had no former experience. The annual demand for trained teachers is based on the number of teachers classed as new. From the annual reports of the State Commissioner of Education, the annual demands for trained teachers may be derived from the data pertaining to the number of teachers without previous experience. The number of white elementary teachers having this standing for each year from 1923 to 1927, inclusive, is as follows:

1923	1,643
1924	1,878
1925	1,892
1926	1,894
1927	2,016

It may be seen by inspecting the foregoing data that there has been a gradual increase in the number of teachers without previous teaching experience, which means that either the turnover or the number of teachers employed has increased, or that there was an increase in both of these factors. It is probable that the latter supposition is the correct one. As a matter of fact, there was a gain in four years of 761 (from 11,447 to 12,208) in the number of white elementary teachers employed.

The assumption that the number of teachers without previous experience in 1927 represents the annual demand for trained teachers for that year, is probably justified. On this demand the data relative to the supply of teachers will be based. From the preceding assumption it may be stated that the annual demand is 2,016 trained teachers for the white elementary schools.

TABLE I.

NUMBER OF STUDENTS ENROLLED IN WHITE INSTITUTIONS APPROVED BY THE STATE FOR TRAINING TEACHERS IN 1926–27, CLASSIFIED BY PROFESSIONAL CERTIFICATES ISSUED

Institution	Total Enrollment	Professional Certificates				
		Perm. Prof. H. S.	Perm. Prof. Ele.	Ltd. Prof. H. S.	Perm. Prof. Supv.	Total
STATE						
East Tenn. S. Teachers' Col.	1,087	48	91	15	6	160
Middle Tenn. S. Teachers' Col.	1,811[a]	56	109	48	5	218
West Tenn. S. Teachers' Col.	800	19	87	14	1	121
U. of Tenn. (College of Edu.)	263	131	88	16	3	238
Tenn. Polytechnic Institute	275	.....	29	9	.....	38
Total	4,331	254	404	102	15	775
PRIVATE FOUR-YEAR						
Bethel College	110	10	8	1	.....	19
Bryson College	93	13	2	2	.....	17
Carson-Newman College	405*	88	37	2	.....	127
Cumberland University	168*	17	8	2	.....	27
George Peabody Col. for Teachers	1,021[b]	106	51	8	3	168
King College	133*	2	.....	.....	.....	2
Lincoln Memorial University	203	23	9	2	.....	34
Lambuth College	119	5	8	6	.....	19
Maryville College	738	47	19	2	.....	68
Milligan College	186	25	1	1	1	28
Southwestern College	453	8	1	1	.....	10
Tennessee College	171	16	12	2	.....	30
Tusculum College	198	24	3	1	.....	28
Union University	1,143	67	31	3	.....	101
University of Chattanooga	372*	25	3	1	.....	29
Total	6,250	492	199	34	4	729
PRIVATE TWO-YEAR						
Centenary College	150[c]	.....	4	2	.....	6
David Lipscomb College	100	.....	30	21	.....	51
Freed-Hardeman	55	.....	5	6	.....	11
Hiwassee College	82	.....	2	.....	.....	2
Martin College	43	.....	9	3	.....	12
Tennessee Wesleyan College	216	.....	13	3	.....	16
Hall-Moody Normal School[d]	143	.....	11	7	.....	18
Trevecca College	44	.....	.....	7	.....	7
Ward-Belmont College	495	.....	.....	2	.....	2
Total	1,328	.....	74	51	.....	125
Grand total	11,909	746	677	187	19	1,629

[a] Includes summer school students. *Statistics of 1927–28.

[b] Estimated by subtracting the summer school enrollment of 2,837 from the total enrollment of 3,858.

[c] Approximate. [d] Discontinued, June, 1927.

RELATION OF TEACHER-TRAINING AGENCIES TO THE SUPPLY OF TEACHERS

It is obvious that Tennessee has no lack of educational institutions authorized to train teachers, for the professional preparation given by 29 of these schools is approved by the state department of education, which apparently pursues the policy of enlisting the efforts of all available agencies in the task of training teachers. The state department of education exercises no supervision over these agencies, but encourages them to co-operate in the teacher-training enterprise by according recognition to all schools that meet with its approval.

THE REGULAR SESSION. In Table I is exhibited the number of students enrolled for the school year 1926-27 in the institutions which were authorized to train teachers in Tennessee by the state department of education. These students are grouped according to the total enrollment in each school and by the types of professional certificates, requiring two years or more of professional training, which were issued to them. The types of certificates attributed to each educational institution represent the number of students from each school who were issued certificates by the state department of education in 1927. The colleges and universities which are considered in Table I consist of those whose students have been able to secure the types of certificates designated. The fact that students from these schools were granted certificates of a professional type is sufficient evidence that these institutions were authorized by the state to train teachers.

In order that the contributions which are made to the teacher-training enterprise of the state by the colleges and universities both within and without Tennessee may be fully appreciated, Table II is presented showing the number and types of professional certificates issued to the students of these institutions.

TABLE II.

SUMMARY OF STUDENTS IN APPROVED COLLEGES AND UNIVERSITIES IN TENNESSEE IN 1926–27 AND CERTIFICATES ISSUED TO THESE STUDENTS AND TO THOSE FROM INSTITUTIONS OUTSIDE THE STATE IN 1927

Type of Institution	Total Regular Enrollment	Per Cent of Total	Professional Certificates					
			Perm. Prof. H.S.	Perm. Prof. Ele.	Ltd. Prof. H.S.	Perm. Prof. Supv.	Total	Per Cent of Total
State	4,331	36.4	254	404	102	15	775	39.0
Private four-year	6,250	52.5	492	199	34	4	729	36.6
Private two-year	1,328	11.1	.....	74	51	.....	125	6.3
Total	11,909	100.0	746	677	187	19	1,629	81.9
Certificates issued to students from schools outside the state			194	145	21	.....	360	18.1
Total professional certificates issued to all students in 1927			940	822	208	19	1,989	100.0

From Table II it is observed that, when the students in the state schools are compared with those in the four-year private colleges and universities in Tennessee, the state schools—having 4,331 students—rank below the private four-year schools—with 6,250—in numbers enrolled. In respect to certification the former, with 775 of their students having been issued professional certificates, surpass the latter, of which 729 students were issued professional certificates in 1927. The enrollment in the state schools constituted 36.4 per cent of the total, while the private four-year schools comprised 52.5 per cent. This order is reversed with reference to the issuance of certificates, for the students from the state institutions were issued 39 per cent of the professional certificates, whereas those from the private four-year colleges and universities secured 36.6 per cent. This is proof that the state teacher training schools are excelling in professional preparation, though not to such a great degree as the public is justified in expecting.

Some of this total number (1,629) of students obtaining certificates in 1927 were not students in these various schools during the school year 1926-27. Nevertheless, the assumption seems justified that 1,629 represents the annual supply of teachers with two years or more of professional education coming from the colleges and universities in Tennessee, for, if some who did their scholastic work in previous years postponed securing their certificates until 1927, it is just as probable that an equal number of students who pursued their study in 1926-27 postponed applying for certificates in 1927. Therefore, the conclusion that the number of students who are granted certificates annually constitutes the supply of teachers prepared each year by the training agencies in the state, seems warranted.

Furthermore, it may be noted that 360, or 18.1 per cent, of those to whom certificates were granted had attended schools in other states. The number of professional certificates issued to students from institutions both within and without the state, totaled 1,989. This number represents the annual supply of teachers for the state from all training agencies, because it is probable that Tennessee's schools educate, at least, as many teachers for other states as she gets back from them. In the year 1922-23 the number of students attending colleges and universities in Tennessee from other states exceeded the number of Tennessee students enrolled in such schools outside the state by 500.[1] Therefore, the conclusion that the training facilities in this state supplied, at least, 1,989 professionally prepared teachers in 1927, seems valid.

THE SUMMER SESSION. The significance of the summer schools conducted by the colleges and universities in Tennessee may be gleaned from the data tabulated in Table III. The summer schools operate under regulations of the state department of education, which require that, "no school

[1]Data computed from Bureau of Education (1926) No. 11, Residence and Migration of University and College Students. Table 30.

shall be recognized or accredited by the State Board of Education that offers less than six weeks of at least five days each, with professional courses of study, including methods in observation and practice schools, approved by said board and commissioner; and the teachers in all professional courses, including critic teachers for each grade, shall also be approved by said board and commissioner." The policy thus enunciated by the state department of education is superior to any that the state has outlined relative to the regulation of teacher-training programs in the colleges and universities in the state during the regular school year.

TABLE III.

ENROLLMENTS IN THE SUMMER SCHOOLS OF THE COLLEGES AND UNIVERSITIES OF TENNESSEE WHICH TRAIN TEACHERS

Institution	Enrollments			
	1915	1920	1923	1927
State				
East Tenn. S. Teachers' College	687	722[a]	826	473
Middle Tenn. S. Teachers' College	656	1,034[a]	1,180	1,260
West Tenn. S. Teachers' College	655	881[a]	808	897
University of Tennessee	201	891[a]	1,019	1,159[b]
Tenn. Polytechnic Institute			302	406
Total	2,199	3,528	4,135	4,195
Private				
Bethel College				135
Carson and Newman College		52	141	162
Cumberland University			85	155
George Peabody College for Teachers	1,123	1,602	2,071	2,837
‡Hall-Moody Norman School		23	78	
Lincoln Memorial University	100		232	86
Summer School of the South	1,763			
University of Chattanooga	328			
Union University		332	761	700[c]
Total	3,314	2,009	3,368	4,075
Grand total	5,513	5,537	7,503	8,270

[a] Statistics of 1921. [b] Statistics of 1926

‡ Discontinued in 1927 *Discontinued. [c] Approximate

It is evident from Table III that the summer schools in the state make large contributions to the professional preparation of teachers. Especially is this true in regard to the state schools, which have practically doubled in their enrollments since 1915. In fact the enrollments for the state summer schools in 1927 were only 136 students less than were enrolled during the regular school year of 1926-27. The state schools had 4,195 students enrolled dur-

ing the summer of 1927, which was 120 more than attended the summer schools conducted by the private colleges and universties. In Table I it was observed that during the regular school year of 1926-27, the private schools registered 7,578 students, while the state institutions drew 4,331. With the exception of George Peabody College for Teachers, which registered 2,837 students during the summer of 1927, the private summer schools are not very significant factors in the training of teachers. The data for 1927, comparing the summer and regular enrollments of the state and private institutions which train teachers, are summarized and set forth as follows:

Type of School	Total Enrollment During Regular School Year	Total Enrollment During Summer Sessions	Grand Total
State	4,331	4,195	8,526
Private	7,578	4,075	11,653
Total	11,909	8,270	20,179

The extent to which the state and private schools are preparing white teachers is determined by the number of these students who obtain professional certificates annually. The ratio of the ability of these teacher-training agencies to prepare teachers is found by comparing the enrollments of these agencies for the school year 1926-27 with the number of students securing professional certificates in 1927, which is as follows:

Type of School	Total Enrollment in Regular and Summer Sessions	Per Cent of Total Enrollment	Total Certificates Secured by Students	Per Cent of Total Certificates
State	8,526	42.3	775	47.6
Private	11,653	57.7	854	52.4
Total	20,179	100.00	1,629	100.00

The tabular data presented above shows that the total enrollment for all sessions of the state schools in 1926-27 was 42.3 per cent of the total number of students in the colleges and universities in the state, while the total number of certificates issued to the students from the state schools was 47.6 per cent of the total number of certificates issued to students in the schools in the state. This shows that the ratio of those attending state schools to the number of students from them, who were granted certificates by the state department of education, was slightly higher than in the case of the private colleges and universities. However, this difference was not as great as the public has a right to expect, for the state schools considered, with the exception of the Tennessee Polytechnic Institute—which had the smallest enrollment—and the summer school of the University of Tennessee, have the

training of teachers as their sole purpose. For their failure to connect their product with the public school work of the state, there are two plausible explanations. One is that many who leave these institutions enter other vocations; the other is that many withdraw before the end of two years of training, and would, therefore, not appear in the data under consideration. It is probable, too, that the private schools, in order to increase their enrollments, make strong bids for prospective teachers by adjusting their curricula so as to make it convenient for their students to obtain certificates. These schools seem to be departing from their original purpose, namely, that of stressing the liberal arts courses, while the state teachers colleges appear to be deviating in the opposite direction by stressing more and more the liberal arts subjects. This tendency is for the purpose, in the case of both types of schools, of meeting the demands of their constituencies, who are in many instances local residents to whom these schools look for support.

RELATION OF DEMAND TO SUPPLY

The number of white teachers in the state, the types of schools in which they teach, and the relation between the demand and supply are presented in Table IV.

TABLE IV.
RELATION OF DEMAND TO SUPPLY OF WHITE TEACHERS IN TENNESSEE IN 1927

Type of School	No. in State	Demand	Supply			
			Total	Shortage	Excess	Total Shortage
Elementary						
County	9,453	1,911				
City	2,755	105				
Total	12,208	2,016	841	1,175		
High School						
County	2,063	226				
City	438	14				
Total	2,501	240	1,148		908	
Grand total	14,709	2,256	1,989	1,175	908	267

In Table IV the supply of teachers is based on the professional certificates which, in order to teach in elementary and two-year high schools, require two years of professional preparation, and four years of such preparation in order to teach in a four-year high school. The demand is determined by the number who have had no previous experience. Table IV reveals that

the demand for white elementary teachers in 1927 was 2,016, and the supply was 841, leaving a shortage of 1,175 trained teachers. The demand for white secondary teachers was 240, while the supply was 1,148 trained secondary teachers, making an excess of 908. Since the elementary schools were short 1,175 teachers, and the high schools had a surplus of 908 persons available, with a four-year college education, it may be assumed that this surplus can be transferred to the elementary schools, where the requirements of training are less exacting, thus leaving a final shortage of 267 in the supply of white elementary teachers in Tennessee. However, there may be many persons prepared to teach in high schools who would not be willing to accept a teaching position in the elementary schools owing to the fact that the salaries of elementary teachers are less than for high-school teachers. Or this unwillingness to accept an elementary teaching position may be due to the fact that the great majority (9,453 as compared with 2,755) of these positions are in isolated regions of the state which are lacking in attractiveness from a social standpoint. The very least that the state can do to offset the difference between the elementary and high-school situations relative to the demand and supply of trained teachers is to make the salaries of elementary school teachers commensurate with those of high-school teachers, providing that these salaries are determined according to professional training.

SUMMARY

1. The annual demand for trained white elementary teachers in Tennessee is based on the number of these teachers who are annually employed without having had previous teaching experience. This number for 1927 was 2,016.

2. In 1926-27 Tennessee had 30 educational institutions which were approved by the state department of education to prepare teachers. One of these institutions was discontinued in 1927. Five of these are state schools, which were established, wholly or in part, for the special purpose of training teachers, the remainder are private. There were registered in the state schools 4,331 students, and 7,578 in the private institutions. To those students who attended state schools in 1926-27, 775 professional certificates—which require two or more years of professional education—were issued in 1927, whereas 854 were issued to the students enrolled in private colleges and universities. In addition to these certificates there were granted 360 to persons who had attended institutions in other states. Therefore, the total number of professional certificates issued in 1927 amounted to 1,989. This number represents the number of teachers which the training agencies of the state are able to supply annually.

3. The summer schools make significant contributions to the professional preparation of teachers for whom they are conducted. However, the private summer schools, with the exception of one, George Peabody College for Teachers, are doing little compared with the schools controlled by the state. When the total enrollments for the year—including both the regular and

summer schools—are considered, it is seen that the state schools constitute 42.3, and the private schools 57.7 per cent of the total. It is further observed that students from the former schools obtained 47.6 per cent of the professional certificates issued by the state, while those from the latter received 52.4 per cent.

4. When the demand and supply of teachers are compared based on two years of college training and the number without previous experience, it is found that the demand for elementary teachers exceeded the supply by 1,175, while the supply of white high-school teachers exceeded the demand by 908. Since one who is qualified to teach in a high school meets the requirements for an elementary certificate, this excess of high-school teachers may, in most cases, be used to supply the shortage of elementary teachers. In order to transfer this excess of secondary teachers into the elementary schools, it may be necessary to make the salaries and positions of the elementary teachers more attractive. If this transfer were made, there would still be a shortage of 267 white elementary teachers, with as much as two years of professional education, to fill the vacancies occurring annually in Tennessee.

THE CENSORSHIP OF LITERATURE

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The recent discussion in the English and American press with reference to the censorship of books, and the action of the Chief Justice of England in the suppression of a book, makes the subject of censorship a matter of some importance not only to authors and publishers, but also to teachers of literature in England and the United States. Time and again, in the class room and out, the teacher is confronted with the problem of dealing with "realism" and "naturalism" and the attitude of students toward literature in its relation with life and daily living. The subject cannot be treated lightly, neither can it be ignored.

Sir Gilbert Murray, in a letter to the *Nation and Athenium,* maintains that "the great serious literature of the world is in general entirely free from obscenity," and he cites as examples the works of Homer, Horace, Virgil, the Greek tragedies, Milton, Shakespeare's tragedies, Racine, Victor Hugo, Dante, Goethe, and Tolstoy. This statement acts as a challenge, and at once there are several critics who spring into the discussion with questions. Mr. Lytton Strachey asks: "Has Sir Gilbert forgotten all about Aristophanes, Catullus, Rabelais, and Swift? These are not minor figures. All were supreme artists whose works are of central significance in the great literatures which they adorn; and all, it is quite evident, show a wish to talk about dirt." Another well-known critic, Mr. Leonard Woolf, points out that, in addition to the great authors mentioned by Professor Murray, there are others equally great (Plato, Lucretius, Juvenal, Petronius, Ben Jonson, Sterne, Fielding, Byron, Boccaccio, Voltaire, Rousseau, Balzac, Proust, and the Archpriest of Hita), whose works are "generally permeated with obscenity." A supporter of Professor Murray expresses the opinion that, to the average reader, Lytton Strachey's and Leonard Woolf's lists are second-class value, and insists that "the lives they describe are so virile, the tragedies they depict are so convincing, that no one is conscious of obscenity."

The discussion is perhaps as old as the other in the "Battle of the Books." But there is a fresh insistence in this matter of censorship and obscenity, because there is a kind of critic today who, from the fact that a few great books are obscene in parts, draws the conclusion that obscenity is a necessary concomitant of great literature. It would be as rational to think that unhealthiness is a necessary concomitant of beauty because a few beautiful women are unhealthy. The truth is that no writer is good because he is obscene, and those great writers who are the most vigilent and finished mas-

ters of their craft are least obscene of all—Sophocles, Virgil, Milton, Racine and Turgenev.

The chief difficulty in dealing with the subject of obscenity is to find a satisfactory test of obscenity in literature. Chief Justice Cockburn of England gave the following interpretative dictum: "I think the test of obscenity is this, whether the tendency of the matter charged as obscene is to deprave or corrupt those whose minds are open to such immoral influences, and into whose hands a publication of this sort may fall." Now, whether coarse language or sex realism in print tends "to deprave or corrupt" depends partly on how it is presented, and partly upon the character of those "into whose hands" it "may fall." This is where the problem touches the class.

Our notions of what is moral are changing every day. Many things which our fathers regarded as legal and moral, seem to us illegal and immoral, and *vice versa*. There are some who face the question of obscenity in a fog of religious sentimentalism. There are others who wish to discuss it in a matter of-fact way. There are still others who wish to lose themselves in the vulgar aspects of the discussion. And, all the while, it is essential to find out, without any emotion about it, just what effect the reading of "obscene" literature has on the reader's mind?

Does the reading of the obscene page increase the acts which are not in the best interests of society? Does the reading of the obscene page alter the attitude of the individual toward sex morality?

Sir Gilbert Murray calls the attention of readers to the fact that the taste that really likes obscenity soon gets to care for nothing else, just as a drunkard loses his sense of taste and cares only for the drink that has plenty of alcohol in it. "Obscenity has a peculiar power of destroying the higher imaginative values in its neighborhood," and that is the danger which young minds are constantly facing.

We are obliged to acknowledge that in the very best masters of literature there are passages that are in bad taste, but there is no special benefit derived by emphasizing these passages at the expense of the whole work as a study of the great issues of life. As a general rule the beautiful passages and the general theme of life and conduct, in any of the great masterpieces, are so satisfying and overwhelming, that the grosser parts need take but a slight though in passing. This is true of a masterpiece like *King Lear,* or even *Gulliver's Travels.*

The teacher in the class room is called upon to guide, interpret, and if possible, inspire his students, so that they may be the better fitted to meet the problems of human society. The function of literature is to help in the development of the individual, so that he may appreciate life and its opportunities, and in turn help others to appreciate life and its values. A sense of proportion, an appeal to the whole gamut of human emotions, a view of life which is not one-sided, are what the teacher should seek for and present to

his class. It is the privilege of the teacher to present the masterpieces of literature as constructive and creative studies of life's problems.

In this effort to interpret life through literature, there is a call for frankness; that is, if there is any benefit to be derived from the discussion that follows the reading of a masterpiece. Dr. Catlin of Cornell University is of opinion that "frankness is acquiring for us a new moral value (which certain educationalists tell us is a virtue even with the young), whereas prudery tends to be regarded with suspicion as springing from entirely unpleasing psychological sources, or from a discarded ascetic philosophy." By facing the facts of life as presented in our masterpieces, with frankness and dignity, it may be possible to do more good for the individual student than by repressing or evading the question when it turns up. But, in the final analysis, the whole matter of frankness and dignity, depend in a great measure on the personality and character of both teacher and student.

The main thesis of this paper, however, is that, since it is the function of literature to *present life as a whole,* it should be the endeavor of the teacher and student to study not only the "obscene" but also the beautiful. A correspondent in the *Nation and Athenium* says that "books dealing with unpleasant subjects should present a true portrait of that unpleasantness," and all good teachers will agree with him. But when this same correspondent goes on to say,

> "To gloss over an immoral action so that it appears to be of no consequence is the most foul form of immorality. Life has its dustbins as well as its drawing-rooms, and no good purpose can be served by making a dustbin look like a drawing-room. . . .The muck still remains underneath. A little apade-work, however unpleasant to non-conformist consciences, would do a world of good . . ."

the teacher of literature realizes that he is living in an age when a host of modern writers are describing dust-bins as dust-bins, and can see nothing else in a dust-bin but the muck that remains underneath. The realist insists on presenting life "as it actually is," dust-bins and all, and his spade-work is done without any respect to the feelings of the rest of the neighborhood. In the process, there is a great deal of muck brought to the surface, and the privacies of life are invaded, and the attention of the average reader is drawn to the mud—and the mud is the most important part of the picture.

Now, there is nothing new in principle in the discovery that things are not what they seem, and that there are dust-bins, muck, rags and vice in the everyday world. And, all good teachers of literature may be willing to grant that there is no harm in calling our attention to this side of life and living. But, as Charles A. Bennett, in a valuable article on *The Cult of the Seamy Side,* has stated, "the present generation of realists . . . have not only perceived the seamy side of life everywhere, they insist that the seamy side is the *real* side." That is the problem in literature today.

There is a generation growing up to whom the seamy side with its sordid, disgusting elements, are likely to appear as the only and real side of life

worth seeking for in the pages of literature. And the result of this attitude is a sort of disgust, a distrust, and a "sophistication" which leads to a cynical view of human relationships—a view which defeats the purpose of good literature, namely, to enable the individual to enjoy the best there is in life. A constant emphasis of the seamy side goes even further—by exposing the depravities and weaknesses of human nature, it stimulates a sympathy with much of the evil it pretends to deplore, and even tends to encourage the humbug that licentiousness is a part of liberty.

Why should it be any more truthful to stress the lusts of life than it is to stress the heroism and majesty of human endeavor? After all, the world and its lusts are too much with us. The function of literature is to get us away from these depressing circumstances, to show us a way out of the mess, so that we may feel inspired and strengthened to fight life's battle and put an end, ultimately, to the ugly circumstances that surround us. As George Eliot has said, ". . . let us always have men ready to give the loving pains of a life to the faithful representing of commonplace things . . . men who see beauty in these commonplace things, and delight in showing how kindly the light of heaven falls on them!"

MALARIA: A HEALTH LESSON FOR UPPER GRADES AND HIGH SCHOOL

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Of all human diseases there is probably none which is of more importance in the world today than malaria, and this in spite of the fact that we have a very full knowledge of its cause, the manner of its spread, its cure, and means of prevention. It has been estimated to be the direct cause of over one-half of the entire mortality of the human race. Sir Ronald Ross says that in India alone official estimates indicate that malaria kills over 1,000,000 persons a year, a larger number of deaths than was caused by the great European war in the first two years of its existence. When there is added to this the thousands from the rest of Asia, Africa, South and Central America, and the southern part of our own country who are annually sacrificed on the altar of the malarial parasites; the millions of others who are broken in health, incapacitated for work and made easy victims of other diseases; the valleys, countries, and even continents which have been barred from all civilization and development by this, more than by any other, cause; then only can we get a glimpse of the real meaning of malaria to man.

The argument has been convincingly put forth that the fall of the great Greek empire and the present poverty-stricken, blighted condition of many parts of Greece are probably due primarily to the invasion of that country, not by burning and devastating armies of men, but by the malaria parasite, an infinitely more terrible though unseen foe, which destroyed the new-born infants, undermined the health of the children or killed them outright, rendered the richest agricultural lands uninhabitable, and, in a word, sapped the vitality of the people until the boasted power and glory of Greece is but a mocking memory.

Researches during recent years in the history of medicine show that malarial "chills and fever" played a large part in the downfall of the Roman Empire, as well as in the ruin of the Grecian people. As the hills about Rome were denuded of their forests, the soil was rendered more subject to erosion, and many tons were carried down the hillsides by heavy rains into the valleys, where large areas of marshes were developed. In these marshes mosquitoes propagated in enormous numbers. Screens and other protective measures were unknown in that day. So a large percentage of the Roman population was annually inoculated with malaria by the mosquitoes. The disease produced great debilitation in the people, sapping their ambitions as

well as their physical strength. The Romans thus became easy victims of the hordes of Germanic tribes who knew no malaria in their northern homes.

There is much malaria in America, particularly in the southern states. The rate of mortality from malaria in Southern Europe and India, however, is far higher than in the Southern United States. Fortunately, the death rate from malaria in the United States is very low, but our economic loss for disability from malaria is inestimable.

The Prevalence of Malaria.—Malaria is prevalent throughout the tropical and subtropical regions of the earth. In our Southern States there are about 3,000,000 cases per year, costing, it is estimated, $100,000,000 annually in loss of labor. In our Southern States the malaria region extends from the eastern parts of Oklahoma and Texas to the Atlantic, and from the Gulf to the parallel of the northern boundary of Tennessee or even farther north.

The Causal Agent of Malaria.—The parasite which causes malaria lives a part of its life cycle in the blood of man and the rest of its cycle in the stomach of the Anopheles female mosquito. The genus name of the parasite is *Plasmodium,* and there are three species belonging to this genus.

The Method of Transmission of the Causal Agent.—The causal parasite is transmitted from an infected human being to other persons by the female Anopheles mosquito, for the male does not live on blood of man or animals but for food sucks the nectar in flowers. The causal germ is not brought from stagnant water by the mosquito, as some persons suppose. The mosquito is never infected with the germ till it has sucked blood containing the parasite. The germ is carried over winter both in the blood of man and in the body of female mosquitoes.

The Life Cycle of the Parasite.—When the germ of *Plasmodium* reaches the stomach of the mosquito a male and a female germ fuse to form a single individual, which later burrows into the stomach wall. While in the stomach wall the *Plasmodium* divides and re-divides itself, and each divided or separated part becomes an isolated and independent parasite. Thus multiplication takes place within the tissues of the stomach wall. These resulting daughter parasites, as we may term them, make their way through the lymph and blood to the salivary glands of the mosquito. When the mosquito next draws the blood of a person these germs are injected from the glands into such a person's blood. Some twelve to fourteen days must elapse from the time when the mosquito receives her first infection before she is able to transmit the germ to a second person. In other words, the germ must pass through a cycle of development in the body of the mosquito before it can be inoculated into a second human being.

While in the blood of man the parasite spends most of its life in the interior of a red blood corpuscle. Soon after being injected by the mosquito into the blood stream of man the *Plasmodium* burrows its way into a red corpuscle, and within the corpuscle the organism divides and re-divides

to form daughter parasites, usually twelve to twenty in number. After a certain period of time the wall of the red corpuscle disintegrates, being thus destroyed by the several daughter parasites within. On disintegration of the red corpuscle the parasites are released into the open blood stream of the infected person. The germs so released at once seek other red corpuscles, into which they burrow and multiply as did their mother parasite. This attacking of red corpuscles and multiplication within them is repeated over and over till there are millions of the parasites within as many red corpuscles. Then the person so infected begins to show notable symptoms of "chills and fever."

How the "Chill" is Produced.—The cause of the chill and the fever may be stated as follows: All the organisms remain within the red corpuscles approximately the same period of time before the corpuscles disintegrate. All the parasites are thus released in the open blood stream at approximately the same hour of day. While yet within the corpuscles the parasites produced a poisonous chemical substance called a toxin, and this toxin was turned loose in the blood stream as the innumerable red corpuscles disintegrated. Thus at approximately the same hour of day the poisonous toxin was freed from a vast number of corpuscles. This toxin is the cause of the chill followed by fever. One of the three species of *Plasmodium* mentioned above causes the corpuscles to disintegrate every twenty-four hours. This species thus produces a chill every day. The other two species of the parasite disintegrate the corpuscles every forty-eight hours and thereby cause a chill every second day. Therefore whether a victim of malaria has a chill every day or on alternate days depends on which of the species of germ is in his blood.

Source of the Causal Agent.—The causal parasite is able to live only in the body of the mosquito and in the blood of man. The organism can not live in any other environment. It can not exist in stagnant water of marshes or ponds. Hence, malaria can not be contracted from bad drinking water, as may typhoid. There are many other popular myths regarding the source of malaria. The germ can not live in fruits, vegetables, or rotten-ended watermelons. Therefore, malaria is not contracted from those sources, as many persons believe. Nor can the malarial germ live in the bodies of fish caught from stagnant ponds. The germ does not come from "night air," except as mosquitoes bring it from infected persons through the "night air." The malaria parasite lives only in the human body and in the body of the mosquito, positively in no other situation.

Prevention of Malaria.—The best prevention of malaria is to eradicate the mosquito. Such eradication is most easily accomplished by destroying the larva ("wiggle-tail") of the mosquito. This larva or young of the mosquito lives in water, of course. Depressions of the earth where water may collect should be filled in. If filling in is not practicable, then drainage may be supplied. If neither filling in nor drainage is applicable, such bodies of

water may be oiled every two weeks with crude petroleum. Or, sometimes, it is practicable to stock the bodies of water with "top-minnows" (genus, *Gambusia*) each individual of which consumes many hundreds of larva and mosquito eggs daily. "The top-minnows" may often be had from state health departments. Around the home many potential breeding places for mosquitoes are frequently overlooked by the inexperienced person—such places as watering-troughs, sagging or clogged roof gutters, collections of water from the drainage of refrigerators upon the earth under the house, and many other unexpected pools. Most persons plagued with mosquitoes have unknowingly reared the pests about their own premises. Mosquitoes rarely migrate more than a half mile from their hatching places, even in periods of strong winds. As a secondary and final protective measure, houses should be carefully screened. The screens should fit snugly into the window and door facings. The wire screen should have at least sixteen strands of wire per inch. The screens used for many homes are of the wide-meshed type designed against house flies only.

Results Accomplished by Mosquito Control Measures.—Innumerable specific examples of the effectiveness of mosquito control in preventing malaria could be mentioned. Only two examples, however, will be mentioned—the one a community project, the other a family instance. In Crossett, Arkansas, in a recent year, there were about 2,500 professional calls made by physicians on malaria cases. In the following year, mosquito control measures were put into effect in that town. During the first year of mosquito control the physicians of Crossett made only 200 calls on malaria patients. The family instance: A certain family at Scott, Arkansas, during a period of three years paid an average of $175 per year for doctor's bills. Following the direction of their enterprising and unselfish physician, this family cleaned up all breeding places of mosquitoes about the home and screened the house. In the succeeding four years the doctor's bills averaged only $20 per year. Other examples of the effectiveness of mosquito control have already been mentioned in other connections.

Suggestions for Laboratory and Field Work in School.—Search for mosquito larvae along the grassy edges of a small brook or along the edge of a pond which may be available. Examination of such places may be made by dipping up some of the water in a new tin dipper or in a dipper which has a white inside surface. In such a dipper the larvae which may be captured will show up conspicuously. Of course, the larvae may also be found in barrels, water-troughs, or other containers of standing water. They may be found at any time from the first of April till the first of October.

When the larvae are found pour them, with some of the water in which they are living, into a fruit jar. The jar should be not more than half-filled. Cover the jar with cheese-cloth, then place in a window where it may be observed daily by the students. The writer has known many persons, even adults, who would not believe that "wiggle-tails" developed into

mosquitoes, and a number of the students will have a surprise and a revelation in this experiment. Let the pupils note the position assumed by the larvae when resting at the surface of the water. Anopheles larvae have their bodies parallel with the surface of the water when at rest, while the larvae of the other genuses of mosquitoes prevalent in the South rest with their bodies hanging at a sharp angle to the surface of the water.

If a microscope is available in the laboratory, or if one may be borrowed from a physician, it will be instructive for the students to see the breathing tubes or breathing pores near the ends of the "tails" of the larvae. It will be observed that the larvae of Anopheles have only breathing pores, no tubes, a structure which accounts for the fact that Anopheles larvae must place their bodies parallel with the water surface in order to obtain air through the pores. The larvae of other genuses (Culex and Aedes) have breathing tubes, and their bodies rest at an angle with the surface of the water.

After the larvae have become adult mosquitoes, the students will note the position of the bodies of the mosquitoes while resting on the vertical walls of the jar. The body of the Anopheles is tilted at an angle to the resting surface, while the bodies of the other genuses rest approximately parallel with the surface.

A second fruit jar of larvae should be prepared after the same manner as the first, except that no covering with cheese-cloth is needed. In the presence of the class pour a bit of crude oil or kerosene on the surface of the water in the jar. The students may note the time required for the larvae to die, which will perhaps be 15 to 30 minutes. It is believed by some authorities that the oil poisons the larvae, while others think that films of oil get into the breathing tubes, or breathing pores, and cause the suffocation of the organisms.

A Mosquito Survey of the community may be made by the students. The pupils, after having a sort of preliminary training given by the teacher, go in couples from house to house and make note of residences where potential breeding places for mosquitoes are found. Also all collections of ground water and streams are recorded. A "spot-map" of the community, or of a small section of the community, can be made in the following way: Procure a map of the community from a local real estate office or from the city officials; or in case no such is available, the students may make their own map of the neighborhood. As the survey of the community proceeds, all potential breeding places of mosquitoes are spotted on the map. The completed map may be attached to the wall of the schoolroom. A copy of the spot-map may perhaps be given to the officials of the community. The writer has known such mosquito surveys to create sufficient interest that the corporation officials instituted anti-mosquito campaigns and, in two or three such instances, employed full-time men to inspect premises and conduct measures of prevention against the pest.

REMEDIAL CASES IN ARITHMETIC
CASE 3[1]

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Case 3, designated in this report as R. H., was a pupil in the Peabody Demonstration School. At the time this study was made he was ten years and six months old and was in the fourth grade.

I. Extent of the Study in Time

This study, a report of which follows, was conducted during the period from April 10 to May 21, 1929. R. H. was taught five days each week for a period of approximately thirty minutes per day.

II. Initial Status

In order to secure a measure of R. H.'s initial ability in arithmetic he was tested with the Pittsburgh Arithmetic Scale, Form A. Before beginning the test, R. H. was asked in which arithmetic operations he believed he was having the most difficulty. He promptly replied, "I have the hardest time with subtraction and multiplication." A check of his work on the test seemed to verify his belief, as the following table shows:

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[1]This is the third of four case studies in arithmetic. Like the two which have preceded (*Peabody Journal*, November, 1929, and January, 1930) and the one which is to follow, this article is devoted to a condensed account of what took place in the case of one child who was having difficulty in arithmetic. Because of space limitations it has been necessary to omit all except the essential parts of the voluminous notes which the author, Miss Trousdale, took during the course of the study. In the September, 1929, issue of this Journal the reader will find (pages 100-07) a detailed statement concerning (1) the purpose of these reports; (2) the general procedure employed, together with a description of the tests used; and (3) the point of view and theory of teaching and learning which determined the nature of the remedial instruction. All four studies were made under the direction of Professor W. A. Brownell, of George Peabody College for Teachers, who is responsible also for the editing of the reports.

The reader's attention is especially directed to the following points made in the report: (1) the peculiar processes employed by Case 3 in dealing with arithmetic operations; (2) the effectiveness of the personal interview as a means of securing accurate diagnosis of these processes; (3) the deterring influence of his peculiar processes in so far as successful achievement in arithmetic is concerned; (4) the dependence of suitable remedial instruction on careful diagnosis; and (5) the importance of oral remedial instruction in order to permit checking on the pupil's processes. The student of the psychology of language will find much to interest him in the habits of thinking exhibited by R. H.)

TABLE I

ANALYSIS OF RESULTS, INITIAL TEST, PITTSBURGH ARITHMETIC SCALE, FORM A

Process	*No. Attempted*	*No. Correct*
Addition	7	5
Subtraction	7	2
Multiplication	6	0
Division	6	4
Total	26	11

R. H. made a score of 11 correct out of a possible 40 on the test. His arithmetic age according to the test norms was seven and a half years, and he was therefore approximately one grade retarded. The results of this test revealed the places of his weakness but gave no indication as to the cause of his weakness.

III. DIAGNOSIS

A. Sources. The following sources were used in securing diagnostic data for Case 3: (1) School records, (2) opinions of teachers, (3) observation of pupil's behavior, (4) informal tests, and (5) the Buswell-John Diagnostic Chart. Below is a more or less detailed account of the data procured.

B. Detailed Data.

(1) School records. No records were available earlier than the fall of 1928 at which time R. H. entered the Peabody Demonstration School from the Nashville city schools. After a trial he was found to be unprepared for the work of grade four and was placed in grade three. His I. Q. according to the Detroit Intelligence Test administered in May, 1929, was 86.[1] Standardized achievement test scores showed him to be below average in other school subjects as well as in arithmetic.

His health chart showed no physical defects, and his conduct and his habits had been such as to rank him as a "standard" child for each of the two years in which records were available. He was interested in boys' sports and was especially fond of baseball. In the latter game he was sufficiently skilled to be made pitcher of his team.

(2) Teachers' opinions. The boy's teachers in both the third and the fourth grades considered him a very slow learner. However, the fact that he was forced in this school to compete with children who on the average have I. Q.'s ten or fifteen points above 100 was undoubtedly at least partly responsible for his comparatively low intelligence rating. He was obedient and gave no trouble from the standpoint of discipline. He had the reputation of putting his best effort into his work.

(3) Observations of behavior. The writer found R. H. to be a quiet, unassuming, and rather reserved child. He seemed to be somewhat indifferent and took the work assigned as a matter of course. However, when challenged by another pupil to compete on an addition test, he showed an

[1] His I. Q. obtained in October, 1929, by means of the Standford Revision of the Binet tests was 101. (W. A. B.)

eagerness to excel and swelled with pride when he surpassed his opponent. He was usually prompt at class and attended to what he was given to do.

(4) Informal tests. Informal typewritten tests in arithmetic were given as often as once each week. These tests served as checks upon the preceding lessons and assisted in locating difficulties which had not been removed or otherwise detected.

(5) The Buswell-John Diagnostic Chart. On April 11 work was begun with the examples of the Buswell-John Diagnostic Chart for Individual Difficulties in the Fundamental Processes. Before this test was administered R. H. was directed to "think out loud." In this way, he was told, his teacher could write down on her chart exactly what he said and might find the causes of his difficulties and be in a better position to give help. The test was completed in two periods of about 45 and 55 minutes. The difficulties were then tabulated according to the "habits" listed on the diagnostic chart. They are summarized below in Table 2.

TABLE II.

TYPES AND FREQUENCIES OF INEFFECTIVE HABITS EMPLOYED BY R. H. IN THE FUNDAMENTAL OPERATIONS

Operation	Habit	Frequency
Addition	a 1 Errors in combinations	14
	a 4 Forgot to add carried number	1
	a 9 Carried wrong number	1
	a11 Split numbers into parts	2
	a19 Derived unknown combination from familiar one	2
	a23 Carrying when there was nothing to carry	1
	*Mixed processes in same example	1
	Total	22
Subtraction	s 1 Errors in combinations	15
	s 6 Subtracted minuend from subtrahend	1
	s 8 Added instead of subtracting	1
	s21 Confused processes with division	25
	Total	42
Multiplication	m 1 Errors in combinations	4
	m 7 Used multiplicand as multiplier	1
	m15 Errors due to zero in multiplicand	1
	*Confused processes with division	24
	Total	30
Division	d 1 Errors in division combinations	1
	d 6 Neglected to use remainder in the problem	3
	d 7 Omitted zero resulting from another digit	2
	d15 Omitted final remainder	2
	Total	8

*Not listed by Buswell and John as common "habits"

The reader will note that while R. H. had a greater number of types of ineffective habits in addition (seven) than in any of the other operations, the most frequently used ineffective habits were in subtraction (42) and multiplication (30).

A careful examination of the notes entered by the writer on her chart revealed surprising conditions. Only the most striking of these will be illustrated in this paper.

In the first place, of the 40 examples attempted in subtraction only 16 had correct answers and of these, 12 had been derived through faulty mental processes. Thus, in the first example at the left,

(1) 15 − 4 = 11

(2) 79 − 24 = 55

(3) 624 − 193 = 431

(4) 189 − 45 = 144

R. H. secured 11 for his answer by saying, "Four, take away five are one; one, take away nothing is one." His processes in the second example to the left were "Four, subtract nine, leaves five; two from seven leaves five." More astonishing was his procedure in connection with the third example when he said, "Three into four goes one; nine into two won't go. Nine into twelve goes three; five into one goes four." In the fourth example he said, "Five from nine goes four times; four from eight goes four times; nothing from one goes one time."

The illustrations cited are particularly interesting for the reason that, as has been said, the answers, though arrived at by remarkably confused thought processes, were correct in each instance. Such intimate details[2] of this boy's procedures, to be had only through direct contact with the individual pupil, constitute a real diagnosis of his disability in arithmetic. His ineffective procedures did not always yield correct answers, however. When dealing with zero in the two following examples, he found an obstacle which he could not surmount. In the first example at the left he said, "Six into naught won't go; seven into five won't go; seven into fifteen goes eight; two into eight goes five"; and in the sixth, he said, "Two into six goes three times; nothing into three goes no times; three into eight goes five times."

(5) 950 − 376 = 580

(6) 836 − 302 = 503

In the second place, R. H. employed in multiplication procedures which were equally as confused as those illustrated in subtraction. Furthermore, his multiplication processes bore marked resemblance to his subtraction processes. The first four examples in the Buswell-John multiplication test are simple combinations of the type 2×4. The first three of these R. H. worked correctly, making use of the usual method, thus, "Two

[2]Such diagnostic data cannot in the nature of things be secured through group tests or through the analysis of children's written work. Nothing on the boy's paper revealed his methods of securing his answers, and the latter, being correct, would be accepted as convincing evidence that he had little difficulty in subtraction. (W. A. B.)

times four are eight." From that point on, however, he confused multiplication with other operations. Of the 29 multiplication examples which he attempted, 20 answers were correct, but 17 of these 20 were arrived at through faulty procedures. "Into" was used instead of "times" in practically every instance. For instance, in the first example at the left, R. H. said, "Five into one is five; five into four is twenty; carry two; five into two is ten, and two is twelve." In the second example at the left he said, "Nine into two is eighteen; nine into naught is one; nine into one is nine." As in the case of subtraction the presence of zero in multiplication examples complicated the situation considerably. His processes with the two examples listed were "Five into naught is five" and "Six into naught is six."

(1) 241 × 5 = 1205

(2) 102 × 9 = 918

(3) 0 × 5 = 5

(4) 0 × 6 = 6

R. H.'s difficulties in addition and in division were not uncommon and need little more than passing comment. In addition the greatest number of his errors was made when he was required to add a digit to a two-digit number, as in $22 + 6$ and $15 + 9$. His answers for these additions were respectively 31 and 27. He could not tell how he combined these numbers except to say that he "guessed." Of his fourteen errors in addition twelve were of the type indicated. The other two errors occurred when he dealt with simple addition combinations.

R. H. made the fewest number of mistakes in division, a condition which may have been attributable to the fact that he had received very little instruction in this operation. Only short division was attempted, and the examples in this subject were correctly computed except when zero was involved.

IV. Remedial Instruction

A. Subtraction. With the tabulation of R. H.'s methods of work completed and his difficulties located it seemed wise to begin remedial instruction with the ineffective habit which appeared most frequently. The summary in Table 2 above shows that subtraction was confused with division 25 times. In these cases R. H. regularly thought "goes into" and "won't go" instead of "from." The first lessons had as their primary objective to make clear the meaning of "subtract." Cards with dots arranged in groups were prepared. A card was shown to R. H. On it he was asked to identify the groups of dots and their sum. The card was then folded so that one group was "taken away"; R. H. then named the number remaining. This was repeated with a number of cards, and each time R. H. was told that taking away dots meant subtracting. The word "subtract" was written on the blackboard, the meaning explained and associated with the process, not only with the answers derived from the use of the cards, but also with examples based on such objects as were in the room. R. H. asked to work on the blackboard and a good many examples were done in this way, the meaning

of subtract being asked for over and over. He learned "take away" and "from" and regularly used these terms aloud. A page of subtraction examples was then worked in the note book in which the lessons were kept. In all his work R. H. was required to do his thinking aloud.

The second lesson began with a review of the meaning of subtract. The examples used were similar to those in the Buswell-John test, a new step of difficulty being introduced as the previous step seemed to have been mastered. Once the meaning of subtraction was clear to him, R. H. made rapid progress. Lesson four consisted of all the subtraction facts. Very little trouble was met, the combination 11 — 2 proving to be an important exception. There followed twenty-eight examples in subtracting numbers of three and four digits each. The computation was done aloud and the old habit of thinking "into" and "goes" was carefully guarded against. Lesson five was devoted to twenty-five examples in subtraction involving five digit numbers and zeros. No lapse into the old errors was noted.

When R. H. found some difficulty with a subtraction combination, such as 14 — 16, the writer endeavored to give him a way of thinking about the numbers so that he might discover the answer for himself. He was asked, "How many are seven and seven?" "Now if you take seven from fourteen, how many are left?" "Then how many are left when six are taken from fourteen?" This general method proved to be very effective.

Up to this time R. H. had had no home work. At the close of lesson five he asked for such work. He was told why he had been given none, namely, to prevent wrong practice. He agreed it was best to wait awhile longer, as he was anxious to make improvement.

B. Addition. R. H. made his greatest number of mistakes in addition in adding a column of two-digit numbers or adding a one-digit number to tens. Lessons were planned for the purpose of teaching him how to span numbers. The following will illustrate the general method of giving him help. Suppose that he had missed 38 + 6. He knew 6 and 6 make 12. From that he discovered that 6 and 8 are 14, and then that 38 and 6 are 44 because 8 and 6 is made up of a 10 and a 4 so that the right hand number must be four and the ten must be added to the 30. A good many examples in column addition which comprised one-, two-, and three-digit numbers were given.

Home work was now allowed because R. H. had not had so much trouble with addition. A page of typed examples, 45 in number, was given, and he was asked to do the work without help. He made only one error and in this example he failed to carry. The assignment of home work consisted of ten examples of eight single digits each, eight of five two-digit figures, and seven of four three-digit figures. This lesson proved to be too difficult, for he missed nine examples. The boy said that he had been bothered by too much talking at home while he tried to work.

On April 22 an addition test was given as a result of a challenge from another pupil. R. H. worked 72 out of 75 simple combinations in two and one half minutes. The combination $4 + 9$ was the occasion of the two errors made. The next lesson was a review of subtraction, the work being done audibly. No confusion of terms was observed.

C. Multiplication. The reader will note that, according to Table 2, R. H.'s second greatest source of difficulty was his confusion of the meaning of terms in multiplication. "Into" was used for "times" 24 times according to the summary. The first remedial lessons were with objects, counting groups a number of *times* until the meaning of multiplication seemed clear. No unusual technique was used to develop the idea. After the meaning was apparently clear, examples with one digit as a multiplier were used, those involving the simpler combinations coming first. R. H. then asked for more difficult examples, and the next lessons included two- and three-digit multipliers.

Lesson twelve consisted of a test composed of examples in addition, subtraction, and multiplication. In addition, two errors were made out of fourteen chances. No trouble was apparent in subtraction. Some assistance was given in the long examples in multiplication which were confusing because the multipliers were longer than the multiplicands. A timed test in subtraction closed the week's work. Twenty-three examples were correctly worked in two minutes. Among these examples were $17 - 14$; $429 - 263$; $702 - 192$.

D. Division. Long division was begun without spending any time on short division as the preliminary tests had revealed little difficulty at this point. The short division form was used, and the subject of long division was introduced with a one-digit divisor. The new work of course involved the operations of multiplication and subtraction in which special instruction had just been given. The fact that these operations appeared now in a new setting seemed in two instances to confuse R. H., as was shown by his reversion to the old habit of saying "into" and "goes" when multiplying and subtracting. Five lessons of approximately thirty minutes each were given to examples of one- and two-digit divisors. Not sufficient practice was supplied to fix the process, however, because of time limitations, but R. H. was eager to return to his group and to match his skill with that of his classmates.

V. Evidences of Improvement

A. Objective Evidence. (1) After the remedial instruction had been completed R. H. was given Form A of the Pittsburgh Arithmetic Scale for the second time. His scores on this second trial were: Addition 5, subtraction 5, multiplication 7, division 5. A comparison of the results of the first and the second application of the test is furnished by Table 3.

TABLE III.

COMPARISON OF RESULTS WITH THE PITTSBURGH ARITHMETIC SCALE BEFORE AND AFTER REMEDIAL INSTRUCTION

Operation	No. Attempted			No. Correct		
	Initial	End	Gain	Initial	End	Gain
Addition	7	7	0	5	5	0
Subtraction	7	7	0	2	5	3
Multiplication	6	7	1	0	7	7
Division	6	8	2	4	5	1
Total	26	29	3	11	22	11 .

It is apparent in Table 3 that R. H. gained far more in accuracy than he did in speed and that his greatest improvement was made in the two operations (subtraction and multiplication) which had caused the greatest difficulty in the first test. It was of course on these two operations that the greatest part of the remedial instruction was focused. As measured by the test norms, R. H. raised his arithmetic age from seven and a half to ten years. In terms of grade-norms his improvement in the six weeks of special instruction was equivalent to a change from the 3B level to the 4B level.

That the crude scores as above presented rather under-value the amount of gain than exaggerate it, is clearly evident from a comparison of R. H.'s test papers themselves. In the first test he made no attempt at all to solve the examples $63\overline{)5607}$ and $37\overline{)3197}$. After remedial instruction he solved the second of these examples correctly. In the first example his answer was 88 instead of 89; the remainder from the second division was equal to the divisor, but he failed to recognize in this situation the need of 9 instead of 8 as the multiplier. Improvement over his initial ability is clearly shown by his second performance even though it is not indicated by an increase in score.

(2) The Buswell-John Diagnostic Chart was then used a second time, R. H. reporting his processes as he had done the first time. Table 4 contains evidence of marked improvement in his methods of thinking about the various operations.

TABLE IV.

COMPARISON OF RESULTS WITH THE BUSWELL-JOHN DIAGNOSTIC CHART BEFORE AND AFTER REMEDIAL INSTRUCTION

Operation	Ineffective Habit	Frequency	
		Initial	End
Addition	Errors in combinations	14	1
Subtraction	Confused operation with division	25	0
Multiplication	Confused operation with division	24	0
Division	Failed to carry second test far enough to make comparison		

Table 5 is a more detailed method of showing the changes brought about by the remedial instruction in R. H.'s methods of thinking of operations. His processes in dealing with the same two examples before and after remedial instruction, it will be observed, are markedly different.

TABLE V.

COMPARISON OF PROCESSES USED BEFORE AND AFTER REMEDIAL INSTRUCTION

Operation	Example	Processes	
		Before	After
Subtraction	528 64	"4 into 8 goes 4 times; 6 into 12 goes 6 times; 4 into nothing goes 4 times"	"4 from 8 is 4; 6 from 12 is 6; 4 from 4 is 0"
Multiplication	241 5	"5 into 1 is 5; 5 into 4 is 20; 5 into 2 is 10; and 2 is 12"	"5 ones are 5; 5 fours are 20; carry 2; 5 twos are 10, and 2 are 12"

B. Subjective Evidence. Other evidences of improvement, subjective in nature, may be summarized briefly:

(1) When working long division after remedial instruction, R. H. remarked: "These are easy now."

(2) When he was told that he could return to his grade and work with the other children for the few days remaining before the end of the term, he said: "I'm as good as a lot of others in my room now, and I won't get mixed up any more."

(3) His regular teacher testified to a distinct increase in his confidence in his own ability.

THE INEFFICIENT SILENT READER IN COLLEGE

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That many college and university students are inefficient silent readers has been pointed out by various authorities such as Stone, Book, Pressey and others. The wealth of research that has been carried on concerning silent reading not only emphasizes the importance of this particular field but also attracts others to study similar problems. There seems to be a need for further research concerning what becomes of the inefficient silent reader in college. We should not feel that our work is complete when we find inefficient readers, because we are merely at the starting point of a more important problem. With this issue in mind, the writers have just completed a follow-up study of such a group over a period of one semester.

At the opening of each school year at the University of Iowa, a battery of tests known as the "Qualifying Examinations" is given to all beginning students. One of the tests given, known as the Iowa Comprehension Test, measures the student's ability to read silently. The scores made on this test are tabulated and each student is assigned a percentile rank corresponding to his scores. The writers have selected for this study those students who scored at or below the 33rd percentile, and are calling these students "inefficient silent readers." Data concerning the 350 students whose scores placed them in this group are given below.

Age—Table I shows the age distribution for the group. There is a range in age of 14 years; the youngest student being 16, while the oldest one is 29. The average age of the group is slightly under 19 (18.8). Since all of the students in this study are freshmen, the average age of the group is probably not very different from that of the entire class.

TABLE I

AGE DISTRIBUTION OF THE GROUP

Age	*Frequency*	*Age*	*Frequency*
29	1	22	8
28	2	21	29
27	0	20	59
26	3	19	76
25	0	18	114
24	4	17	45
23	3	16	5
Total			349
A. M. 18.82			Median 18.64

Sex—This study seems to indicate that there is a larger percentage of inefficient readers among the men than among the women students. (Two hun-

dred sixty-five of the 350 students, or 76% of the total group, included in this study are men, while only 85, or 24% are women.) This fact, however, is not significant until we consider the entire personnel of the freshmen class. Further analysis of the data shows that approximately 40% of all the men students are found in our group, while less than 29% of the women are included.

Intelligence—While no intelligence test is given to the entering student at the university, one might consider the total or composite score of each student on the entire battery of tests as a fair index of his intelligence rating, since this composite score has been found to correlate highly with some of the best standardized mental tests. Table II shows the distribution of composite percentile ranks for our group of inefficient silent readers. The scores range from 1 to 85, the median score being 17.7. These facts tend to corroborate the claim that there is a significant relationship between reading ability and intelligence. However, the data show that some inefficient readers possess high native ability.

TABLE II

DISTRIBUTION OF COMPOSITE PERCENTILE SCORES

Scores	*Frequency*	*Per Cent*
81-85	4	1.1
76-80	1	.29
71-75	2	.57
66-70	3	.86
61-65	4	1.1
56-60	9	2.6
51-55	7	2.0
46-50	9	2.6
41-45	16	4.6
36-40	15	4.3
31-35	18	5.1
26-30	20	5.7
21-25	41	11.7
16-20	47	13.4
11-15	47	13.4
6-10	53	15.1
1-5	54	15.4
Total	350	99.82

Scholastic Record—In order to determine the progress of the students in this group, the writers kept in close contact with the offices of the Dean of Men and the Dean of Women. Students who are not doing satisfactory work in any course are reported by the instructor and an announcement of this fact is sent to the student. These notices are called delinquency reports, and are sent to the Dean of Men and the Dean of Women. The first authentic reports are sent in at mid-semester. Table III shows the distribution of mid-semester delinquency reports received by 217 of the 350 included in the group under consideration.

TABLE III

MID-SEMESTER DELINQUENCY REPORTS
(First Semester 1928-29)

Number of reports	*Frequency*	*Per Cent*
5	1	.4
4	9	4.1
3	43	20.0
2	55	25.3
1	109	50.2
Total	217	100.0

Thus, 217 students, or 62% of the entire group of inefficient readers were reported delinquent in one or more subjects during their first semester's work. Approximately 50% of the group who received delinquency reports were deficient in more than one course. One person received five such reports. These delinquency reports represent a total of 1253 semester hours of college work, or an average of 5.7 hours for each of the 217 students. Table IV is included to show the subject distribution of the delinquency reports. Chemistry and English brought the largest number, although nearly every course in the college curriculum is represented in the table.

TABLE IV

SUBJECT DISTRIBUTION FOR DELINQUENCY REPORTS

Subject	*No. of Reports*	*Per Cent of Total*	*Credit Hours*	*Per Cent of Total*
Art	2	.5	6	.5
Botany	12	3.1	48	3.9
Chemistry	58	15.0	232	18.7
Economics	19	4.9	57	4.6
English	94	24.3	282	22.8
French	25	6.5	75	6.1
Geology	23	5.9	92	7.4
German	11	2.8	33	2.7
Latin	1	.3	3	.2
Logic	1	.3	3	.2
Mathematics	16	4.1	64	5.2
Music	6	1.6	18	1.5
Physics	15	3.9	60	4.8
Political Science	39	10.1	117	8.4
Psychology	1	.3	3	.2
Spanish	29	7.5	87	7.0
Speech	27	7.0	27	2.2
Zoology	8	2.1	32	2.6
Total	387	100.2	1239	100.0

Average per subject 21.5

A second check was made upon the group at the end of the first semester. As soon as the semester grades were sent in to the registrar's office, a record of them was made. Table V gives a very interesting picture of the situation, representing the grade distribution for the 282 students who completed the semester.

TABLE V

GRADE DISTRIBUTION FOR THE FIRST SEMESTER

Grades	*Credit Hours*	*Per Cent of Total*
A	48	1.2
B	357	9.1
C	1,620	41.3
D	1,087	27.7
Fd	433	11.0
Cond. Abs. Lt. o. etc.	340	8.7
Courses dropped at mid-semester	41	1.0
Total	3,926	100.0

It is probably safe to assume that the majority of those students who did not complete the semester dropped out because of scholastic difficulties. Had the grades of these students been included in Table V, the proportion of failing work would have been even more pronounced. As it is, almost half of the total work carried has been reported as D or less, indicating a very inferior grade of work. Table VI shows the subjects in which the failures occurred. English, Spanish, and Chemistry were responsible for the largest percentages of failures, although fifteen other subjects contributed.

TABLE VI

DISTRIBUTION OF FAILURES ACCORDING TO SUBJECT

Subject	*Frequency*	*Per Cent of Total*	*Credit Hours*	*Per Cent of Total*
Botany	5	3.6	20	4.6
Chemistry	14	10.1	56	12.9
Economics	4	2.9	12	2.8
English	28	20.3	84	19.4
French	12	8.7	36	8.3
Geology	5	3.6	20	4.6
Geometry	1	.7	3	.7
History	3	2.2	9	2.1
German	7	5.1	21	4.8
Latin	2	1.4	6	1.4
Mathematics	4	2.9	16	3.7
Philosophy	2	1.4	6	1.4
Physics	6	4.3	24	5.5
Political Science	10	7.2	30	6.9
Psychology	1	.7	3	.7
Spanish	19	13.8	57	13.2
Speech	10	7.2	10	2.3
Zoology	5	3.6	20	4.6
Totals	138	99.7	433	99.9

Elimation—As suggested previously, many of the students included in this study discontinued their work at the University for one reason or another. Fifteen students had left the university before the mid-semester reports were made; 67, or about 20%, of the total group had left before the end of the first semester. The last check made, on February first, showed that 110 of the original group, or about 32%, had dropped from school. An ex-

amination of the records of these 110 students shows that 81% of them had received delinquency reports, with an average of 7.8 semester hours per student. Of the 43 students who remained until the end of the semester, each had an average of 9.3 semester hours of Fd (failed) work.

Conclusions—

1. Poor readers were found in all age groups; the range being from 16 years to 29 years.
2. This study seems to indicate that more poor readers are found among men students than among women students.
3. Relatively low native ability characterizes most of the members of the group studied, although some of the students' composite scores place them in the upper quartile of their class.
4. That the inefficient silent reader is incapable of doing satisfactory work in college is shown by the large number of failing grades received in many subjects.
5. The fact that 32% of the group studied were eliminated from the university during the first semester indicates that the poor reader not only fails to do satisfactory work, but is able to persist in college for only a brief period.
6. The records of those students who were eliminated from the university indicate that most of them were doing a very inferior grade of work when they left school.

EDITORIALS

EDUCATION THROUGH ACTIVITIES: THREE VIEWPOINTS

I

Sponsoring the viewpoint of an Activity Program as one desirable way of learning, both for students in college as well as children in the classroom, Early Elementary Education welcomes this opportunity to state as clearly as possible its honest convictions.

For ten years this department has believed: (a) in experiencing the joy of communicating by exchange and sharing of ideas; (b) in experiencing the feel of work by first-hand acquaintance with raw materials, and using these materials to realize purposeful ideas moving toward worth-while conclusions; (c) in experiencing adventure by uncovering, discovering, and finding out the world about us; (d) in experiencing beauty in forms of good arrangement—decorating, adorning, rhythm and melody; (e) in experiencing bumping into one another in order to learn how to keep out of each other's way.

All these activities include the most fundamental processes of using what the human organism natively brings to education. At the same time it is recognizing all that society values.

Yet all that one may know about the human organism as stated knowledge, all that one may know about social values and civilization's contributions are of little avail to the student of education without active participation with children in a situation that uses these values.

This calls for keen observation and ability to discriminate values. Observing a child or a group of children working with a purpose, the student must learn to recognize:

(1) What is being done with the purpose?
(2) In which direction is the purpose moving?
(3) What plans are called for?
(4) How well do the plans work?
(5) What is the realized outcome?
(6) What learnings have accompanied this process of purposeful activity?

This is a direct parallelism to all life situations whether within or without the school setting.

In the process of finding which plans work and which do not, definite knowledges are found necessary to gain desired effects. "How many shingles must we order to cover the roof of our clubhouse porch?" says one child of second grade level. Authority could step in and tell the child the approximate

number. Vicarious experience may teach us much: as we go through life we cannot experience everything it is true, but here let us know that we first must have had enough basic first-hand experience to be able to appropriate vicarious experience intelligently. This is precisely why we have so many foggy and blurred learnings. They are so often meaningless to the learner. This group of children found not only the correct number of shingles by laying nine shingles horizontally and seven shinges vertically, but, much more important, they found that the process of multiplication is built upon addition and is a short-cut process of the latter.

One cannot possibly deal with real situations employing natural activities of children without uncovering all the various tools and techniques of the old curriculum.

We cannot go far in realizing a worth-while purpose without arithmetical reckoning, without learning to read, without learning to write, without learning to spell. The mastery of these techniques, however, must rest in something meaningful to the learner—the more meaningful, the more quickly mastered.

Perhaps just here rests the most glaring departure from traditional procedure, largely because learnings, including skills, do not fall out in a prescribed and uniform order. This is most disturbing to any mechanistic control. Let us grant then that much blundering and some waste is a part of the price we pay for any try-out but the worth of the learnings balances the account.

The technique of teaching children through an activity program is yet in the making. It may be said to be still on trial, but it must be given a fair-minded, unbiased trial. It must have its chance to live without being throttled in its infancy. L. G.

II

All theories of education rest on certain fundamental assumptions either of a philosophical or psychological nature. In examining any educational practice it is well to keep in mind the nature of the individual who is to be educated. The following statements, in the opinion of the writer, summarize the psychology in the light of which an activity program must be judged.

Education is neither a pouring in nor a drawing out process. Education takes place when the individual is developed or organized through stimulation and reaction. Stimulation and reaction are the factors which account for the growth of the individual. The problems of education then relate to: (1) the environmental stimuli which cause a reaction, (2) the nature of the reaction as it is conditioned by the past experiences and present physiological conditions of the individual, and (3) whether the reaction is useful in realizing the organization of the individual in a given environment.

The importance of the environmental stimuli, or materials of instruction, lies in the fact that an individual cannot exist apart from environment. In truth only by definition can we separate individual and environment. It is

impossible to think of the individual without at the same time thinking of him in relation to his environment. The individual may be considered as the sum total of behavior patterns developed in a protoplasm in response to environmental stimuli. We thus see the importance of the stimuli in the education of a child.

The nature of the child is such that early in life, and probably all through life, its reactions are in terms of movements. Now these movements or reactions may be considered at first as purely manipulatory. Later, the child develops from such responses, language habits with which meanings are associated as another type of response. These two types of responses, manipulatory and language, constitute in the main, if not entirely, the individual's chief means of adjustment.

Not all reactions are equally useful in realizing the organization of the individual. The physiology of the individual is such that certain parts of the organism are especially well suited for making responses. The hands and speech organs, these are unusually well adapted for making adjustments. The chief difference between the two lies in the fact that symbols and meanings can be associated with the sounds and movements of the speech organs very readily. Language, symbolical thinking, becomes man's chief response mechanism.

It appears that any sort of educational program must be evaluated and arranged in terms of the three psychological factors enumerated and discussed above. The following conclusions seem to the writer psychologically sound.

1. The child by the time he enters school has developed considerable ability in both types of responses mentioned above. Meanings are associated chiefly with language sounds and symbols. Manipulatory responses, building, sawing, etc., are of value chiefly because they may be used in keeping the child busy and happy, in his socialization, and in giving him new experiences.

2. Knowledges (mental content) are largely secured through language. An activity program should lead directly to a reading program and in the intermediate grades the activity program should involve a minimum of larger physical activities and a maximum of activities involving language.

3. All activity is a result of stimulation. The teachers function is not to arbritrarily select activities but to guide children in their selection. This does not mean that the teacher has no definite plan. It merely means guidance towards predetermined and selected ends.

4. Those activities are most worthwhile which demand effort near the individual's level of achievement and which aid the individual most effectively to adjust himself. An activity program, unless it deals with content and symbols, rarely secures a high level of work.

5. Life is not a static affair. Education must look to the future. Therefore the activities of today must be those which will prepare the individual for the future. The child is a *becoming* individual.

6. An activity program may be and often is formal and lifeless. It has no intrinsic merit. Its value is to be found only in what it can contribute to the developing child.

7. All programs are activity ones. The distinction between so-called activity programs and others is in degree only. The former type designates those in which children select under guidance situations in which they will work.

8. There is a great deal of eloquence but very little evidence as to merits of the one type over the other. S. C. G.

III

Educational outcomes may be defined in terms of three major types of change in pupils—knowledge or information, habits or skills, and attitudes or emotional responses.

There are those who hold that these outcomes can be secured best through definite activity on the part of the pupil. The definition of activity seems the crux of this assertion. If by pupil activity is meant the inner change accompanying any experience, there seems no room for any argument. This would consider as active a child who is looking at pictures, listening to music, reading a book, or taking a sun bath.

Such a definition of activity carries no educational implication that compells revision of any possible technique of instruction.

If by pupil activity is meant the physical doing of objective things, there are very definite implications in regard to techinque, some of which seem of doubtful validity. To read a story becomes an activity only in case the story is to be dramatized, told to some other person, or otherwise made the basis for *doing* by the reader. An insistance on such an interpretation of activity fails to account as educational outcomes the information which may be acquired, the thought processes which may be stimulated or the emotions which may be evoked by *mere* reading. The assertion by some people that such outcomes are not possible, or at least not likely, from reading unaccompanied by immediate physical response may be matched by the assertion of others that such outcomes are not only possible, but inevitable.

The belief that only those experiences are educative in which the pupil is an active agent shifts the emphasis of education from desired outcomes to desired processes. Instead of seeing to it that the children acquire certain knowledge, habits or attitudes, the teacher is enjoined to keep the children busy. The educational result is looked upon as the concomitant of this *business*. When, as is frequently the case, the results are looked upon as a mystical something that cannot be observed or tested, there is a considerable demand for faith in the efficacy of the process. The work of the school is to be organized in terms of pupil activities which are accompanied by undefined outcomes which are assumed to be desirable.

This program of activities, to be worth while, must consider the individual differences of the children who are active. Two boys select stories and read them aloud to the group. One boy may gain in his love of reading, and the other may lose.

Until more is known about the results of particular activities in the education of particular children it seems that the following statements have significance.

1. School work should be planned in terms of outcomes desired rather than of processes.

2. The materials and the processes recommended for use should be selected with direct reference to the outcomes desired and the children to be educated.

3. All materials and processes should be evaluated on the basis of their contribution to desired outcomes. This is just as true of activities proposed as it is of any material or other methods.

N. F.

TO WHOM IT MAY CONCERN

1. *Recommendations serve a necessary part in the routine of employing teachers.*—Frequently conferences between employer and applicant cannot be arranged. There are then but two sources of evidence available, transcripts of school grades and recommendations. There is as yet very little demand for transcripts. This demand will grow. Where conferences are arranged the more astute presidents and superintendents prefer to study the applicant's references before meeting him. If a vacancy is known long enough ahead to permit of leisurely approach the best method is to study carefully the list of availables and therefrom to decide which one or ones he desires to meet.

2. *A recommendation should be compactly, clearly, and honestly written.*—It should deal neither in evasions nor in half-truths. If the writer definitely believes the applicant undesirable in any respect he should say so. It is the protection he has to offer against the development of unfortunate teaching situations. The applicant should be permitted no contact with statements made of him. Recommendations have been so effusive and, at times, so perilously close to insincerity that the employing public has been educated to suspect the eligibility, whatever the position may be, of one whose credentials carry the slightest negation or reservation. A superintendent was handed this letter:

"Mr. Black is an industrious, loyal, and intelligent teacher. He is rather pleasing in personality but is not particularly imaginative. His work in Blankville has been of a nature quite acceptable."

"Doesn't that mean that he is no good?" inquired the superintendent. Superlativism is a pernicious habit. One who has contracted it has lost all power of intelligent discrimination. He has caused employers not alone to distrust his extravagant estimates but to fear conservative ones. There are

not many first-class teachers available anywhere. The second-class teacher exists in quantity and is vastly useful in educational procedures. In fact public education could not survive without her. As desirable educational service cannot be bought for $1200 a year as for $2400, and fictitious advantage, such as "cheap living conditions," cannot be made to compensate for the difference. The superintendent is obligated, of course, to get the best he can for his money, but he should realize that his situation very probably cannot attract the best teachers. And that weakness he should accept in his consideration of the credentials submitted. Every effort should be made to convince employers that they are best protected when recommendations are made with penetration and discrimination.

3. *Since recommendations tend in time to lose their value, they should be kept reasonably up to date.*—There are before the writer two statements made by the same teacher of the same student but written five years apart. They indicate precisely the opposite estimates of the student's work and worth. These conflicting statements were made by a thoughtful and honest teacher. It is no novelty for thoughtful and honest teachers to be mistaken. Their latest estimates should be and probably are the best.

4. *Recommendations are of value when made by those who have both personal and professional knowledge of the applicant, and by those who realize clearly that they have something to lose if the applicant fails.*—One recommendation is not as good as another, and thoughtful employers are learning which ones to accept and which to discredit. Teachers under whom the applicant has studied and administrators under whom he has taught are in most cases all that are necessary. "Character witnesses" add little weight. However as many competent recommendations as are available should be used in each case. The estimates of ten are more dependable than the estimate of one.

A. L. C.

AN ADDED SERVICE FOR SCHOOL ADMINISTRATORS

A conference has been called for school board members and school administrative officers to meet at Peabody College throughout the week, commencing April 28.

This conference is a definite attempt to aid school men in keeping abreast of the best of modern movements in education. The major emphasis is on the practical. An attempt is made to be helpful immediately to the administrator on the job. The topics chosen for the meeting reflect this attitude. These topics include problems of personnel, school housing, school finance, school equipment and supplies.

The conference includes not only visiting administrators but also recognized national authorities who come to supplement the work of the Peabody faculty and the reports of public school men.

It is to be hoped that school men throughout the country will avail them-

selves of the opportunity provided by this meeting. The work and the results will be watched carefully. It is confidently predicted that this meeting will rank high in importance among annual educational gatherings.

W. D. C.

WELCOME

The Journal of Higher Education began with the new year. It is published to serve the professional interests of "instructors and administrative officers in the colleges, universities, and professional schools of the United States."

The field is large, and the service is needed. *The Peabody Journal of Education* welcomes this publication and wishes it success in its chosen field.

N. F.

A NEW FORM OF FRATERNITY ACTIVITY

Research work, financed by a fraternity, seems a new and wholly desirable departure from traditional fraternity procedure. This is the experiment being made by the Phi Delta Kappa Fraternity in the establishment of a research fellowship for graduate work and a research scholarship for undergraduate work in the field of education. It is interesting to note that they are making this provision for furthering research before the fraternity is provided with national headquarters and while many of their officers are still serving without pay.

It is to be hoped that the service rendered will do as much for the growth and development of the fraternity as would the pomp and circumstance of officials or buildings which might have been purchased with these funds.

N. F.

THE NEW BOOKS ON OUR SHELF

[The reviews, most of them signed, are by appropriate members of the Faculty of GEORGE PEABODY COLLEGE FOR TEACHERS. Our limited space necessitates concise notices—brief, pointed, thoughtful comments, without elaboration.]

A New Study of English Words. By JESSIE MACMILLAN ANDERSON. Cincinnati: American Book Company, 1929. Pp. 116.

A New Study of English Words is an introduction to philology for use of the classroom. It is concerned not only with historical facts but also with creating in the student a keen appreciation of word usage through an understanding of the laws of language development. It is satisfactorily illustrated and simply and interestingly written.

M. R. B.

Borrowing Money for the Public Schools. By HENRY ROWLAND HALSEY. New York: Bureau of Publications, Teachers College, 1929. Pp. viii + 127.

"The present study is an attempt to investigate the use of public credit in connection with a particular situation—the administration of the public schools of Florida." The author attacks the problem by carefully analyzing the public debt situation in Florida. Consideration of borrowing practices in general leads to suggested economies and dangers in the Florida situation.

The study is carefully done in great detail and exhibits an extended knowledge of the field of finance. It should be of interest to all officials responsible for borrowing money with which to carry on public enterprises.

H. L. C.

Oral English and Debate. By LYMAN M. FORT. New York: Henry Holt and Co., 1929. Pp. v + 314.

This textbook of oral English is conventional in outline but has unusual directness of appeal. The author has also succeeded in assembling a fine group of exercises, each motivated by sheer usefulness and common occurrence in life. While designed for high schools the text has ample material for any group of beginners in oral English.

T. H. M.

The Training of the Will. By JOHANN LINDWORSKY, S. J. (Tr. by A. Steiner and E. A. Fitzpatrick.) Milwaukee: Bruce Publishing Company, 1929. Pp. 226.

This book is written from the pedagogical viewpoint by a foreign psychologist of the University of Cologne, who has made careful study of "the will" and who has written a book on this subject as well as one on experimental psychology. The book is now in its enlarged third edition; it originally grew out of lectures delivered at various educational conferences. The English translation seems to be a good piece of work, making the discussion delightfully clear and easy to follow. Following a consideration of experiments bearing on the psychology of will the author takes up practical methods of its training. Father Lindworsky rejects the old view of will as a general power of the soul capable of being trained by formal exercises, etc., as well as many more modern views, and he attaches great importance to consciously organized systems of thought and imagery, contending that such thought, when organized about certain central values, is most permanent in our lives, whereas more feelings are least permanent. The book touches matters of vital importance to education and psychologists. J. P.

Public School Administration. Revised and Enlarged Edition. By ELLWOOD P. CUBBERLEY. Boston: Houghton Mifflin Company, 1929. Pp. xxii + 710.

By revision this standard text becomes more of a general textbook on public school administration, in state, county, and city. State organization receives much more space. The bibliographies are new, additional questions and topics for class work are included, and a series of problems to be worked and written out is inserted for the first time.

L. H.

The Business Administration of a School System. By WARD G. REEDER. Boston: Ginn and Company, 1929. PP. x + 454.

Business Administration of Public Schools. By HARRY P. SMITH. Yonkers: World Book Company, 1929. Pp. xv + 432.

The appearance of two such books at this time is indicative of the interest in the business affairs of schools, a phase of school administration which has been largely neglected in favor of the educational side.

The books have most topics in common. Both treat the budget, unit versus multiple-type control, accounting, insurance, operation of school plant and janitorial service, planning and constructing school buildings, financing current expenditure and capital outlay, payroll procedure, and administration of supplies. Smith begins his text with an excellent account of the organization and work of the Board of Education; Reeder closes his book with chapters on the business administration of rural schools and the administration of transportation. In spite of the common topics, the books seem to this reader to supplement rather than to duplicate each other.

Both books include annotated bibliographies at the end of each chapter; Smith groups many of the record form exhibits in an appendix, while Reeder includes them with the running accounts; both books are indexed. Both books make liberal use of reported researches, and both books show the present scarcity of objective standards of business administration; we believe that the publication of these books will be a substantial help in the establishment of such standards.

These books will find service as manuals for the administrator in service, or as texts for the administrator in training. W. D. C.

City School Surveys, an interpretation and appraisal. By HOLLIS LELAND CASWELL. New York: Bureau of Publications, Teachers College, Columbia University, 1929. Pp. vi + 130. Teachers College Contribution to Education No. 358.

A book which will interest anyone interested in surveys. The survey method is defined as that process through which enterprises are provided with related facts which are then made the basis for intelligent action.

The study limits its analysis to published surveys of city schools made by outside experts, where the survey of the school system was not incidental to any other, and where the primary purpose was the betterment of the local school system.

Five agencies are found to have conducted such surveys, the agency now doing 76% of such surveys being definite organizations in universities and colleges of education. Cost to the community varied a great deal. No significant relation is found between the time of the survey and the superintendent's term in office.

The third part of the book studies the effectiveness of surveys in securing changes in the local school system, in the judgment of the superintendent in charge.

The author closes his book with the suggestion that as more schools secure trained leadership, surveys will need to spend less of their time in gathering data, and that there will develop a need and use of educational consultants for special problems in the local system.

The appendix includes a list of city school surveys since 1910, the information blank used in the study, and a good annotated bibliography.

To the student in School Administration who studied Dr. Caswell's book two questions occur: (1) Would the same result of the effectiveness of surveys have been secured if the author had used the minutes of boards of education instead of superintendent's judgments as to the changes which occurred? (2) How many of the changes which occurred would have occurred anyhow without a survey? W. D. C.

Programs for Special Occasions. For Primary Grades. By MARION KENNEDY and KATHERINE ISABEL BEMIS. New York: A. S. Barnes and Company, 1929. Pp. 104. Price, $1.50.

This is a compilation of pageants for the celebration of special days. This should prove helpful to elementary teachers who are called upon to put on pageants on such short notice that they do not have time to develop the work with their own children. N. F.

Certain Phases of County Educational Organization. By EDMUND LEWIS TINK. New York: Bureau of Publications, Teachers College, 1929. Pp. 104.

This is fundamentally a status study of the organization of county school systems in the state of Florida. It raises rather sharply two questions: (1) should the county school superintendent be elected or appointed; and (2) should the special tax in school districts be continued? The evidence in answering these questions seems fragmentary and inclusive. The recommendations are very definite. N. F.

Personnel Study of Directors of Physical Education for Men in Colleges and Universities. By HARRY SCOTT. New York: Teachers College, Columbus University, 1829. Pp 90. (Contributions to educ. No. 339)

An excellent study for use of Teacher Training Colleges. A. D. B.

State Banks and the Federal Reserve System. By CHARLES S. TIPPETTS. New York: D. Van Nostrand Co., Inc., 1929. Pp. viii + 393.

The author gives a clean, concise and well balanced discussion of his subject. He begins with a statement of the attitude of National and state bankers toward the adaption of the Federal Reserve Banking System. The new banking system once in operation, the author next discusses the relationship of the state banks to the new system. The reasons are given as to why the state banks did enter the new system. Next the changes made in the laws of the Federal Reserve System in order to encourage the state banks to become members are discussed. The advantages and disadvantages of National state banks are clearly set forth. The par collection controversy is discussed competently. Branch banking is next taken by followed by a chapter which very ably summarizes the problems raised and discussed in preceding chapters. The book is an able and timely discussion of the important issues raised in our present banking systems. A valuable book to bankers and advance students in banking. O. C. A.

Mental Deficiency. (Fifth Edition) By A. F. TREDGOLD. New York: William Wood and Company, 1929. Pp. xvi + 535.

This fifth edition of Tredgold's well-known book, first published in 1908, has been largely re-written in the light of recent progress in this general field. The definitions of general mental deficiency and the three degrees of such deficiency, found in certain earlier editions, as based on the British Mental Deficiency Act of 1913, have been modified to incorporate the newer statement according to the 1927 Act. It is, therefore, now clearly laid down in this volume, that mental deficiency may result not only from innate causes but also from such external conditons as injury or disease. More detailed examination of the revisions in this edition we cannot enter into here. Workers in the many fields of psychology, sociology, the administration of justice, and education generally, will be interested in this revised edition. J. P.

Problem Exercises for High School Teachers. By DOUGLAS WAPLES. Chicago: The University of Chicago Press, 1928. Pp. ix + 99.

This volume includes a collection of ten tests which are designed to secure data on which to select and place teachers, or to secure data which may be useful in studying problems relating to the training of high school teachers. For example, a test describes a certain problem situation that arises in a classroom. Five possible solutions are then suggested and the examiner is asked to check the best and the poorest procedure to follow as a means of meeting the situation. He is also asked to indicate, if he can, a procedure which is better than any of those listed in the test. Insufficient data is at hand on which to base a conclusion regarding the value of the tests. They appear to have interesting possibilities. C. W. K.

Problems in American Life. By JOSEPH I. ARNOLD. Evanston: Row, Peterson & Company, 1928. Pp. 656.

A book designed for a course in the general social sciences. Part I discusses the individual, group life, the influence of geographic environment and social heritage. Part II, III, and IV take up the problems of economic organization, social organization and political organization respectively. Part V is devoted to a discussion of selected problems concerning our social, economic and political life. The book contains many illustrations and has questions, references and suggestions for further study at the end of each chapter. A text suitable for junior college work.

An Athletic Program for High School and College Women. By MARJORIE HILLAS *and* MARION KNIGHTON. New York: A. S. Barnes and Company, 1929. Pp. 102.

An athletic program, but very narrow in scope and not what title implies—not complete. A. D. B.

History of the United States. (Revised Edition). By CHARLES A. BEARD *and* MARY R. BEARD, New York: The Macmillan Company, 1929. Pp. xiv + 680 + xxxvii.

A decided improvement over the earlier edition, enlarged and extended in scope. In attractiveness of appearance, mechanical make-up, number and quality of maps and illustrations, there is little left to be desired. Emphasis is on economic, social, and spiritual values, rather than political and military affairs. However, these latter aspects of our national development are not neglected. The organization varies from the conventional in that fewer major divisions are made for the treatment of periods of development. There are seven main divisions treated in the following order: Part I. The Colonial Period. Part II. Conflict and Independence, Part III. The Union and the National Life, Part IV. The West and Jacksonian Democracy, Part V. Democracy and Conflict, Part VI. National Government and World Policits, Part VII. Pregressive Democracy and Foreign Relations. These periods are not always clearly separated by date lines—a fact that should recommend the book. The period of Discovery and Explorations—time honored and familiar—is absorbed by the Colonial Period. Part V. The West and Jacksonian Democracy emphasizes factors in national development frequently neglected by historians. Each chapter is closed with pertinent references, questions on the chapter, research topics, and questions for debate. The author's style, while an improvement over that of the earlier edition, may prove difficult in some discussions, to too many high school students. The treatment of controversial questions is fair, authentic, and impartial. The index, while somewhat comprehensive, could be better arranged for use in studying large topics. R. L. B.

Professional Tests of Measures of Teaching Efficiency in High School. By CHARLES W. BOARDMAN. New York: Teachers College, Columbia University, 1928. Pp. 85 (Contributions to educ., No. 327).

In this study Dr. Boardman has attempted to devise profession tests to measure teaching efficiency, and to determine the relative significance of such factors as age, experience, and professional knowledge on teaching efficiency. In the absence of valid objective measures to determine changes in pupils which are brought about by a teacher's activities, he concludes that "the method of measuring teaching efficiency by judgments is the best and most valid available.

Although many of his finding are of a negative character, the study represents a carefully conceived and well-directed plan of attack on a problem of importance. The report is recommended to graduate students who are interested in acceptable forms of reporting educational research.

Administrative Procedures in Curriculum Making for Public Schools. By WALTER D. COCKING. New York: Teachers College, Columbia University, 1928. Pp. vi + 120. (Contributions to educ., No. 329)

The problem of the curriculum is ever with us. We will never find the perfect curriculum, but we can not discontinue our search for it. Schools exist that teaching may be done. The existence of instructional activities implies that something is being taught to some one The tentative selection and organization of those "somethings" is one of the major phases of educational endeavor.

In this study, Professor Cocking scrutinizes very closely the work which administrators have done, are doing, and should do in the development of the curricula which their teachers present. The study is made with such care and poise, the materials are so complete and the findings so logical as to warrant its eligibility for service as a hankbook by every superintendent and president wholesomely perplexed by the problems of curriculum construction. A. L. C.

A Primer of Blue-Print Reading. By THOMAS DIAMOND. Milwaukee: Bruce Publishing Co., 1927. Pp. 70.

The first part of this booklet contains 46 orthographic projection drawings, with a space for each in which the pupil demonstrates his ability to read the drawing. The second part is devoted to 22 problems in orthographic projection sketching.

Since no blue-prints are used in developing the contents of this text, its name is something of a misnomer. However, it should prove very helpful in school classes where time is limited on where it is desired to have beginners develop quickly the ability to read and make simple mechanical drawings. T. T. L.

School Finance and Business Management Problems. By NICKOLOUS L. ENGELHARDT and CARTER ALEXANDER. New York: Teachers College, Columbia University, 1928. Pp. xv + 526.

This is the third of the series of problem books in Public School Administration prepared by the staff of the Department of Educational Administration in Teachers College, Columbia University.

It is proposed as a basic text in School Finance. The procedure set forth is a study of 113 financial problems which the author have faced in their survey and field work. These problems are grouped under 9 heads as follows:

I. Fiscal Control and Business Management.
II. Business Practice.
III. Accounting.
IV. The School Budget.
V. Revenues and Their Management.
VI. Indebtedness and Bonds.
VII. Management of Physical Property.
VIII. Research in Finance and Business Management.
IX. Public Relations.

Attached to each problem is a brief but carefully selected bibliography.

As a text book, the work is very valuable, presenting as it does a series of practical problems to the student of school finance. It is also extremely helpful to the student in this field in orienting the problems of finance and assisting him in discovering the most authentic printed materials thus far developed.

W. D. C.

Readings in American Citizenship. Compiled by JOHN T. GREEKAH. Boston: Houghton Mifflin Company, 1928. Pp. xvi + 436.

This book of selected readings for a course in the social sciences in the high schools is divided into three parts. Part I. Readings in Politics, consists of 14 chapters, 25 readings, totaling 208 pages. Part II. Readings in Sociology, contains 8 chapters, 10 readings totaling 106 pages. Part III. Readings in Economics has 8 chapters, 13 readings, embracing 110 pages. At the end of each chapter are found a list of questions, suggestions for laboratory work, and references. The selections are well chosen. They are adapted to use for high school students, some being written by high school students themselves under the direction of their teachers. O. C. A.

The Use and Interpretation of Educational Tests. By HARRY A. GREENE and ALBERT N. JORGENSEN. New York: Longmans, Green and Co., 1929. Pp. xxii + 389. (Longman's educ. ser.)

The authors of this text write directly to the classroom teacher and to the beginning student in the field of measurement. They are not at all concerned with intricate technicalities which, as found in many other texts designed for the same purpose as this one, are far better suited to the deliberation of experts. A novel and an especially commendable feature is the fact that approximately one third of the space is devoted to problems of diagnosis and to the use of tests in this connection. Valuable appendices list the better achievement, intelligence, and diagnostic tests for the elementary and the high school. The content is practical throughout and as such appears to be superior to any other text prepared as an introductory text. W. A. B.

Consumers Uses of Arithmetic. By ALERDEEN O. BOWDEN. New York: Teachers College, Columbia University, 1929. Pp. vi + 69. (Contributions to educ. No. 340).

This study represents another attempt to determine the curriculum content of non-vocational elementary arithmetic by an inventory of adult usage. An elaborate questionnaire, containing 345 verbal problems and warranted to embrace the whole range of the current arithmetic offering, was personally presented to 42 adults. An abridged questionnaire of 123 problems, selected from the original 345, was then filled out by 640 adults. On the basis of the returns the investigator recommends the elimination of 85% more of the already reduced content of arithmetic. The technique employed is a distinct improvement over that used by Wilson and by Camerer, but it is totally inadequate to yield an answer to the question proposed for study. The author, however, is thoroughly convinced of the soundness of his method and the significance of the results obtained. W. A. B.

Human Behavior. By STEPHEN S. COLVIN and WILLIAM C. BAGLEY, (2nd. Rev.) New York: The Macmillan Company, 1929. Pp. xi + 334.

In this revision the early chapters remain largely as they were written by the deceased author of the first edition. The most important changes in later chapters are additions considering tests and other measurement methods, together with individual differences in intelligence and their significance. Bagley's well known personal views as to the influence of environment and training on intelligence are clearly presented, though, of course, not established. It is held that what genius achieves is significant only "in the degree that it can be brought into the service of the great masses," but when and how must this service be rendered? An insistence on immediate results would have been very damaging to many valuable researches of the past. "Changes in IQ," as used in the book, must be taken only as changes in the results of the individual measurements of the IQ. It is important that this point be kept clearly in mind by the reader. Binet himself warned against taking any obtained M. A. as genuine without considering the subject's educational opportunities. This fact has been neglected in recent years by many testers who are not also carefully trained psychologists and it is well that the authors stress this point, provided that it be kept clearly distinct from Bagley's extreme views as to changes in intelligence. In the final chapters such matters as fatigue and the elements of character formation are emphasized.

The book as a whole neglects the techniques of scientific work is psychology, and it still carries the objectionable assumptions and even direct statements that consciousness directs behavior. There is, of course no proof of this. The new edition is very clearly written, as was the first, and simple in its statements. Exercises and references are, in this edition, put at the end of chapters. J. P.

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The Psychology of Elementary School Subjects. By SYDNEY C. GARRISON and KARL C. GARRISON. Richmond, Va.: Johnson Pub. Co., 1929. Pp. xx + 569. (Johnson educ. series.)

This book is not an electic achievement. Its production offered little if any encouragement to the scissors and paste industry. It is the outgrowth of a decade of experiment carried on largely in the Peabody Demonstration School, and in these modern times a decade is an unusual allotment of time in which to ripen experimentation. The book applies, with a minimum of waste motion, psychological principles to the procedures of learning on the elementary levels. Appropriate approaches are established in Language, Reading, Spelling, Handwriting, Arithmetic, Drawing, Music, Social Studies, and Nature Study. The treatment of the book is neither "popular" nor technical. Any elementary teacher seriously in search of help will find it one of the most helpful in the field. A. L. C.

The Alchemy of Light and Color. By OLIVER L. REISER. New York: W. W. Norton and Company, 1928. Pp. 78. (New Science ser.)

This book will not be easy reading to persons who are not acquainted with the technicalities of the physiology and psychology of vision and something of the physics and chemistry underlying our visual experiences. Such readers will hardly be able to distinguish between established facts and rather wild and free speculations, several of which reflect the author's lack of technical training in the sciences mentioned above. Hypotheses proposed by the author are often not stated in such terms as to be susceptible of scientific verification. Several terms are used loosely and the book bears evidences of rather hasty writing. The author is mainly concerned with the "relation of consciousness to the nervous system," with particular reference to vision. The reviewer does not believe that he has greatly elucidated the problems considered. J. P.

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The Effect of Familiarity with the Examiner upon Stanford-Binet Test Performance. By EDITH MARINE. New York: Teachers College, Columbia University, 1929. Pp. 42. (Contributions to educ. No. 381.)

A total of 124 children, 92 of them enrolled in the kindergarten of private schools in New York City and 32 in the first grade of a public school in Detroit, were given the Pintner-Cunningham and the Detroit First Grade intelligence tests. They were then divided into two equivalent groups on the basis of CA and average of the IQ's obtained from the tests. One group was then brought into close contact with the investigator for a short period of time in order to establish a feeling of familiarity. Then both groups were given the Stanford-Binet tests by the investigator, who was as the result of the experimental procedure on terms of intimacy with the one group and a complete stranger to the other group. In this way it was hoped to isolate the factor of familiarity of the examiner and to study its effect in mental measurement. The results showed no significant difference as between the children of the two groups, whether the measures compared were changes in IQ for the groups as wholes or the per cent of children passing those tests making special demands on the language ability of the children. These results are counter to the popular belief and to the specific warning of experts with reference to the necessity of rapport between examiner and child. Considerably more study of this problem must be made before the author's conclusion should be accepted. The need for caution is illustrated by the unreliability of measures from the tests used. Thus 40 per cent of the children secured IQ's ten or more points different in size, and 10 per cent, IQ's twenty or more points different, on the two tests. Changes of thirty points in I. Q. were reported in four cases. The author takes no account by such weaknesses in her basic data.

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